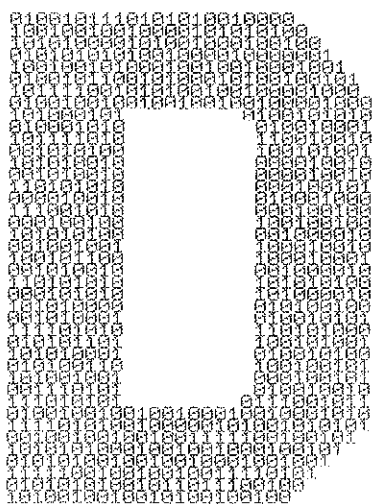


# TEXTS THAT CHANGE SCHOOLS

*The Promises and Challenges of Going Digital*



DEVELOPMENTS IN DIGITAL TECHNOLOGIES — including, but not limited to, the rise in the number of portable devices we observe students using daily — have reached the point at which schools must call into question the form and function of one of the mainstays of the K–12 classroom: the printed book. Although digitized versions have been available and accessible for some six or seven years, conversations centered on their place in schools have been trailing the actual trends and developments. Until now.

The argument in favor of digital books is crystallizing, as seen in the recent launch of the Digital Public Library of America,<sup>1</sup> an ambitious project to realize a large-scale digital public library that will make our cultural and scientific record available to all. The library itself is a project generated by Harvard University’s Berkman Center for Internet & Society, whose overall goal is to “explore cyberspace, share in its study, and help pioneer its development.”<sup>2</sup>

Pundits of the digital medium see the promise of interactive textbooks that allow teachers not only to offer course content, but also to check comprehension, embed relevant videos, poll students, or incorporate recent discoveries in order to keep the texts up to date. They also see the promise of hyperlinking multiple texts and/or materials, a process that brings a new understanding to the term *intertextuality*. In short, they see all learners (teachers, too!) having a more intimate experience with the materials used in courses, including the ability to link and even alter those materials, should they so choose.

BY KEVIN J. RUTH

Add to the mix the possibility of free distribution and access to these materials, and the argument for embracing digital books becomes even more compelling.

Depending on your perspective as an educator, the intensely iterative nature of the digital technologies driving this seeming revolution in books is either a boon or a curse. Educators excited by digital technology see every new development in digital books as yet another way of rethinking a book's utility. Yet, as traditional bibliophiles point out, the pace and nature of technological change are difficult for schools to manage — thus, the curse. For the digital resisters, it is not only a matter of time and money, but of programmatic continuity.

The resistance to digital books is sure to remain with us for some time. A recent article by William Cronon, president of the American Historical Association, speaks for many educators who don't want to venture far from the printed word. "I linger on these [paper texts]," Cronon writes, "because they can serve as symbols of the relationships between books and readers that we have not yet fully succeeded in reproducing in the digital world. Indeed, I would go further: it is precisely this collecting of carefully curated, intricately structured, lovingly tended personal libraries [...] that is becoming more challenging as texts that once lived on physical pages bound between the covers of physical books are transformed into virtual etexts floating ethereally among the virtual shelves of virtual libraries."<sup>3</sup>

For me, an academic bibliophile trained in textual criticism, Cronon's words resonate strongly. Yet I cannot help but consider that, in centuries past, *amateurs* of scrolls bemoaned the innovation of codices, and *amateurs* of codices bemoaned the innovation of the movable-type printing press, both for similar reasons. Codices and the printing press were disruptive innovations, yet it would be difficult to argue that the dissemination and concatenation of human knowledge suffered as a result of them. Quite the contrary.

At this moment, caught as we are in the earliest stages of this next chapter in the history of the book, it may be difficult to see the value of all the digital innovations, and it may be challenging for schools to manage, but I'm convinced that digital books represent an important step forward in human knowledge, education, and interconnectivity.

#### THE CENTER FOR THE DIGITAL BOOK

At Tower Hill School (Delaware), we are treating the growth of digital books as both unavoidable and desirable. Our mission, with its emphasis on the promotion of a blend of traditional and innovative approaches to learning,

The interactive capabilities of digital books represent an important development for schools, not just in the history of the book, but in the history of learning. As educators, we face a dilemma: We can sit by and let various for-profit companies create the future of the book, or we can help shape that future by participating directly in the creative process. At Tower Hill, the notion of participating creatively and purposefully in the future of the book resonates. Why leave it to major publishing houses to continue to own and direct the conversation and products?

However, to Cronon's earlier point about the value of print books: just because digital books hold so much promise does not mean that we pro-

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compels us to join the conversation on digital books. For that reason, in the fall of 2012, we launched the Center for the Digital Book as the "go-to" resource for schools interested in learning about, creating, and promoting digital texts.<sup>4</sup>

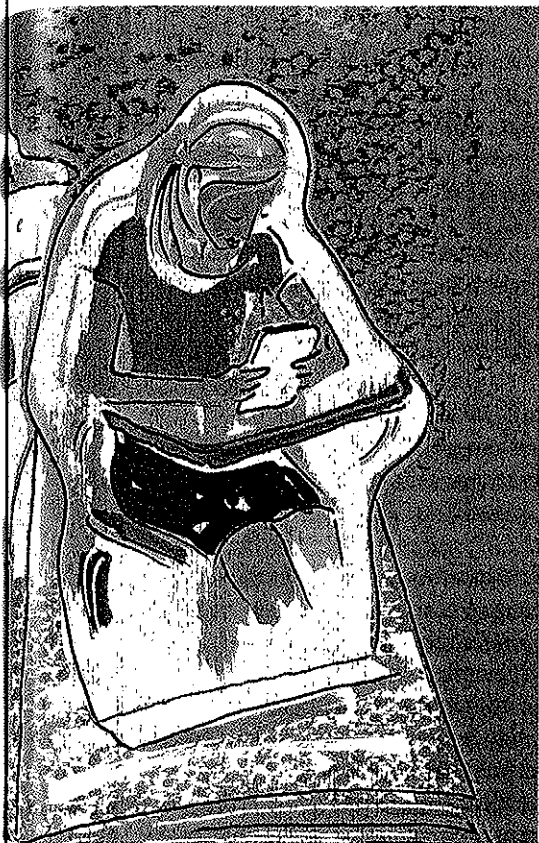
In this networked age, it makes sense to offer what is termed an "open innovation forum" so that all independent schools can use the center as a connectivity hub. For example, if a teacher is looking for collaborators on a book project, she need only post the project on the center's website, and interested parties can express their desire to join that project. The website also offers authors resources regarding publishing platforms and copyright issues. Eventually, with a fully connected community, the site will function as a social network centered on digital book production.

pose to jettison all paper-based texts. As a school, we continue to love and use paper-based books, *and* we are exploring the promise of digital books. We're sure there are many schools that feel the same way. It isn't an *either-or* proposition; it's *both-and*. In other words, we see the present moment as a time of desirable tension between print and digital media. That tension, we believe, will result in fruitful advances in how we understand the notion of a book.

#### THE DIGITAL BOOK LANDSCAPE

At this point in the evolution of digital books, we know that early pioneers are seeing success. Neeru Khosla, founder and executive director of CK12 Foundation,<sup>5</sup> a provider of free, open-source digital textbooks (launched in 2007), tells us that her foundation is "seeing tremendous responses from teachers

across the country when they adopt digital textbooks. The ease of creating and personalizing these books is resonating with all audiences, and they are now realizing that quality [K-12 materials are] within reach of everyone. We've had students, teachers, and parents aggressively adopting our platform, and our usage has been growing exponentially in the last six months: a rate of one million learning



experiences delivered per week, across desktops and mobile devices!"

In other words, students have used CK12's FlexBooks to learn about a given concept (e.g., graphs of linear equations in Algebra 1), check their comprehension by means of an embedded assessment that automatically scores a student's answers, and even pose questions to other users of the same digital book (think: social network).

From the for-profit publication houses, there is the more obvious development over the past several years: a significant increase in the number and availability of proprietary

digital texts and ancillary materials. Indeed, business portfolios of digital books currently represent the area of greatest growth for traditional publishers. The next development that we expect to see from them is the ability for a teacher (or a school) to choose content sections and form a customized digital textbook. Publishers are smart to think in this way, given that their open-source competitors are already working hard in this area. In other words, developments in publishing houses' digital portfolios are now intersecting with similar developments in the ever-accelerating open-source textbook movement, the result of which is intense competition.

If the successes of the early pioneers in digital books are any indication, the future is bright. Digital texts have the ability to change schools: to change how we do school, rather than just change which texts we use.

The traditional textbook is limited in terms of its functionality: it contains texts, images, practice problems, and the like, yet it is constructed around a singular mode of literacy: reading. We might better term it "traditional literacy." While reading remains a critical skill for all learners, it is not the *only* form of literacy. Therein lies the impetus for pioneers of digital teaching and learning: emerging literacies, many of which live in the digital realm, require our attention.<sup>6</sup> Whether digital storytelling, video-gaming, fan fiction, video and music remixing, or social networking (among others), it is clear that our world now requires these new forms of literacy from our students.

Traditional textbooks do not allow for the integration of these literacies into the daily preparation of students, let alone prompt them to consider how to employ these literacies in anything they might produce as learners. Viewed through that lens, traditional textbooks are not structured around the acquisition and promotion of 21st-century skills. Digital texts, however, can be constructed expressly to fulfill that function, especially since students can participate more directly in their learning through the medium of the textbook itself.

## THE INDEPENDENT SCHOOL EXPERIENCE

One particularly attractive feature of digital books is their adaptability to various learning environments. The experiences with digital texts at Kildonan School (New York), a school for students with language-based learning differences, is a case in point. As Bob Lane, academic dean at Kildonan School, explains, "The interactive and multisensory nature of an iBook, which our teachers can create specifically for their classes, can make texts come alive for our students. Gone are the days of flat, static textbooks; we welcome 'books' with video clips and 3D manipulative objects!" In short, digital books are helping Kildonan School to live out its mission in new and improved ways.

In a twist on who creates the digital book, Harry Neilson, Latin instructor at Tower Hill School (Delaware), has created a FlexBook for his semester elective on the letters of the Roman author Pliny the Younger; his students, as part of a larger project, create content for the book as well. Neilson mentions that creating a digital book with his students has exceeded all his expectations.

"I underestimated the willingness and ease with which they engaged with the material presented digitally," he says. "The perceptive and thought-provoking comments they posted for each of my chapters proved to me the value of a digital book as a learning experience. In addition, by adding their own chapters to the book, they gained ownership of their own learning. Creating a FlexBook illustrated with images and embedded video helped to dissolve some of the mystery of antiquity and make it more applicable to the students' daily lives."

Roberta Berman, head shop teacher at Bank Street School for Children (New York), is creating a digital text called *The Art of Shop*, meant to provide a fine arts approach to woodworking, to be published by Bank Street College of Education on iTunes U. Berman notes that the multimedia book "includes step-by-step curricula

for ages K–8, transcribed emergent conversations with children while they are sculpting, and a historical perspective on why this work is so valuable in the development of the whole child.” She adds an important point — one that dovetails nicely with the open-source spirit that is beginning to pervade the digital text movement: “Being available at no cost will mean that it is easily used by anyone.”

John Hutzler, director of technology at The Abraham Joshua Heschel School (New York), is taking a different tack, waiting for the moment when digital text providers figure out a better way to address pricing. Currently, he thinks it’s asking too much for schools (or families) to pay for the digital device and then pay what is still considered “full price” for the textbooks. He proffers, “I would love nothing more than to put a small, light, digital reader into my students’ hands with all their textbooks on them. Good-bye to 30-pound backpacks, hello to dynamic content. Hyperlinks to online content are a bonus. The idea of creating custom texts based on pick-and-choose content from the publishers would be wonderful.” If digital text providers are able to address the high costs of etexts, “We’ll be there in a heartbeat,” adds Hutzler.

### THE BOTH-AND PROPOSITION

It is necessary to put some of the arguments in favor of digital books in context. A cursory perusal of truly interactive digital textbook offerings shows that, currently, most are oriented toward mathematics and the sciences, although there are a growing number of interactive social studies texts as well. Why might that be? Because creators of such texts can embed assessments that provide instant feedback (scoring) to the student, providing him or her with ongoing affirmation of comprehension.

Printed books offer something entirely different: a sensorial engagement of a medium that stems from a living source, a tree. Interestingly enough, it may turn out that the

traditional book — the codex — is more durable than the digital text, since we do not yet know how well these texts will be maintained and remain searchable in the future, given how frequently we see changes in their hardware (tablets, ereaders, etc.) and in the software used to operate them. Schools, then, will continue to use printed texts not only for reasons of sensorial engagement, but also for continuing a human experience that has defined us for

improvement to teaching and learning, and to our ability to deliver on our school missions?

2. How do we cite or refer to digital texts, whether in academic work or in the classroom? Opening a book to a certain page will no longer be as ubiquitous an occurrence as it is today; instead, teachers will have to curate and organize digital information in such a way that they create neologisms

## MUST EDUCATORS WHO PREFER TO KEEP TEACHING THE WAY THEY HAVE BEEN TEACHING FOR YEARS EMBRACE DIGITAL TEXTS AS PART OF A SCHOOL'S OVERALL STRATEGY FOR TEACHING AND LEARNING?

the past 2,000 years: the interaction between reader and codex. There is room for both approaches to the word: notwithstanding the aggressive growth of digital texts, every year more books are printed than in the previous year.

### THE CHALLENGES

What are the next stages in this evolution in books? Based on my experience working with more than 150 creative and thoughtful educators from the New York State Association of Independent Schools (NYSAIS), Connecticut Association of Independent Schools (CAIS), and Tower Hill School, it is clear that independent schools must address certain challenges and opportunities. Seven are presented here. Though not exhaustive, they are meant to serve as food for thought and, more important, *action*.

1. We are in the midst of a paradigm shift. Our understanding of a book is evolving from a printed text — with high-quality information, but unchanging except through printing of new editions — to an electronic text that contains high-quality customizable content. Do we see this shift as an

for identifying “where we are” in the sources. Is it a *location*, a *place*, or is it something entirely different?

3. How do we ensure the quality of content, specifically in self- or team-generated digital books?

4. How do we handle the constant change in devices and platforms for digital texts? Is acclimating ourselves to this kind of change a cultural issue inasmuch as it is a technology issue?

5. With digital book platforms offering so much interactivity, does it make sense for schools to choose a learning management system (LMS) in addition to vibrant, interactive platforms for digital texts? Are they becoming indistinguishable from each other?

6. Must educators who prefer to keep teaching the way they have been teaching for years embrace digital texts as part of a school’s overall strategy for teaching and learning? How will schools address the balance of (or, the tension between) a paper-text-based pedagogy and a digital-text-based pedagogy?

7. With all the desultory construction of language and ideas evidenced in social media, how do schools, in creating and using digital texts, combat what many educators consider to be a globalization of superficiality of thought?

Irrespective of how we address these challenges, the tea leaves suggest that, at some point in the near future, the notion of "taking out" one's book will be somewhat of an anachronism in many classes, though it will persist in others. Increasingly, students will be using mobile devices (laptops, tablets, and whatever else comes down the pike) to house their primary and secondary sources for classes, not to mention their calendars, project management grids, and related learning tools. It stands to reason that digital texts will play a prominent role in that kind of ecosystem.

Yet the immediate demise of the printed text is not upon us; there is no revolution. What is upon us is the third major evolution in how we systematize and disseminate knowledge. With books and courses being constructed in a digital environment, we are bound to interact differently with them, and they are bound to interact differently with each other. Our charge as educators is to explore how we might align the human experience we call *learning* with that evolution. Independent schools, populated as they are with world-class explorers, represent the ideal proving grounds for digital texts. It is not a question of dismantling libraries and banning printed texts. Rather, it is about participating in and shaping the development of a powerful new medium that is used to disseminate knowledge.

And that's very much our business.

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#### Notes

1. <http://dp.la>.
2. <http://cyber.law.harvard.edu>.
3. William Cronon, "Recollecting My Library..."

and My Self" *Perspectives On History* (November 2012) 5.

4. See [www.centerfordigitalbook.org](http://www.centerfordigitalbook.org).
5. See [www.ck12.org](http://www.ck12.org).
6. W. Kist, "Basement new literacies: Dialogue with a first-year teacher." *English Journal*, 97.1 (2007), 43-48.
7. A learning management system is a

software application that allows a school to administer, document, track, report, and provide courses and/or professional development within a given community of users. Some popular systems are Blackboard ([blackboard.com](http://blackboard.com)), Haiku ([haikullearning.com](http://haikullearning.com)), and Moodle ([moodle.org](http://moodle.org)), among others.

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