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E-Book Issues in Composition: A Partial Assessment and Perspective for Teachers

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Abstract: E-book devices (and devices that support e-books) are increasingly being integrated into the working lives of students and teachers. We discuss our pedagogical and institutional experiences with the Sony Reader in composition courses at both the graduate and undergraduate level, reporting on dynamics and challenges associated with three key literacy tasks: accessing texts, operating texts, and marking texts. We conclude with a heuristic that can help teachers and administrators adopt and design an e-book initiative.

Book reviews, including the reviews that typically appear in *Composition Forum*, generally focus on the textual content of a book—the ideas and arguments of authors—and they tend to ignore the materiality of the book, unless the book design calls attention to itself. Meanwhile, reviews of e-book devices on sites like cnet [http://www.cnet.com], zdnet [http://www.zdnet.com], and digitaltrends [http://www.digitaltrends.com] consider technological features and functions, but they tend to separate those discussions from considerations of textual content and context. In this essay, we remix the genres of book and software/hardware reviews in order to explore the interconnectedness of texts and technologies in the context of the composition classroom.

Electronic books, or e-books, are no longer an oddity or fringe novelty within American higher education. Although printed books and textbooks still dominate college classrooms, students and teachers can download e-books from a wide variety of places (e.g., university libraries, commercial bookstores, open-source projects) and display them on cell phones, computers of all sorts and sizes, and of course e-book devices like the Amazon Kindle, Barnes & Noble Nook, Sony Reader, and the rest. In addition, e-books tend to cost less than their printed counterparts, and they can sometimes be rented from publishers, a fact not unnoticed by administrators, parents, and others concerned about the escalating expenses associated with going to college or graduate school. For these reasons and a few others, e-books have become a thinkable option for composition courses at both the graduate and undergraduate level.

But there is a lot to think about. With printed books and textbooks, teachers have internalized a whole series of expectations about literacy and learning and how those complex processes unfold and operate in formalized school settings. We ask students to read in a patient and critical manner, for example, assuming they can underline and otherwise mark difficult passages and key ideas and phrases in ways that are useful to them. We ask students to reference their readings in class, assuming they can use page numbers as a reliable and constant navigation aid. We ask students to discuss their readings in class, assuming they can access passages at a pace that does not impede face-to-face conversations and interactions. And yet teachers cannot and should not make such commonsense assumptions, for conventions and expectations from print and speech do not always support and align with student tasks and experiences with e-books.

The same could be said for experiences and tasks on the teacher side of the equation, including work involving computers and other online literacy technologies. E-books may not integrate very well or easily with campus bookstore and library protocols, for example, or with controls placed on university computer networks for installing files and managing electronic devices. E-books may not integrate very well or easily with systems used for bibliography management, course management, or distance education. And perhaps most notable of all, many books and textbooks in composition studies are simply not available in an e-book format. In certain contexts and cases, then, the curricular integration of e-books will require teachers to revisit and reconfigure pedagogical apparatuses and frameworks.

This is a valuable if indirect function of e-books (and of other developments in the evolution of literacy technologies): they can help to defamiliarize the familiar, as sociologists Zygmunt Bauman and Tim May might put it, unsettling assumptions and encouraging teachers to reimagine taken-for-granted patterns and practices. We are not the first researchers to point out this cultural phenomenon, nor will we be the last. It involves a powerful pedagogical perspective that is crucial to critical literacy. In addition, e-books are not the first modern technology to encourage a reconsideration of reading activities. In the early 1990s, for example, hypertext researchers admonished the field to intensify its focus on the counterpart of writing; to that point in time, computers and writing specialists had been somewhat preoccupied with studies of composing. In one prominent strand of work, these researchers contrasted the non-sequential nature of computer-based hypertexts with the sequential nature of printed texts to comment on the ways in which the material dimensions of literacy technologies shape readers and the reception of texts (see Bolter; Johnson-Eilola). We anticipate that the material dimensions of e-books will overlap with, and depart from, those of computer-based

hypertexts. These dimensions include physical aspects of media, but also social and pedagogical conditions that enable the production, distribution, and use of e-books.

Our discussion of e-book issues for composition teachers is informed by a collection of classroom experiences with the Sony Reader (model PRS-505).{1} [#note1] In the 2009 spring semester, 24 students in an undergraduate section of honors composition (taught by Michael) and 10 students in a graduate rhetoric seminar (taught by Stuart) read course texts on this device and used it to support classroom discussions of texts and the preparation of written papers. The themes for both courses focused on literacies and technologies. We interviewed students (on four different occasions) about their experiences, asked them to write reflective commentaries, and analyzed the Readers themselves to understand the ways in which students used and configured them. In addition to e-books and PDF files, students read printed books and several printed essays, and they worked on typical composition assignments as well as reflective commentaries. We reinvented a few components of the courses but on the whole remained committed to the pedagogical approaches of an established composition program. We were curious to see how the Sony Reader might perform in a conventional institutional environment.

We asked our students to read course texts in a very particular way that derives from the values and objectives of our field. What are these values? There are multiple valid answers to variants on this fundamental question, for a complex literacy task like reading can be (and has been) characterized from various useful perspectives, theoretical and empirical. The quick characterization we offer emerges from our sense of an overall course objective that is common to composition: **Teachers ask students to work with discourse and metadiscourse in conventional and rhetorical ways to both consume and produce knowledge for a variety of audiences, goals, and occasions**. The component parts of this general purpose statement help to illuminate reading expectations that have developed in the discipline. Students in composition classes are task-oriented and focused on the applications of texts, on doing things with texts in order to participate in the work of culture. Students read to create as well as learn, using disciplinary and strategic frameworks, and they rely on texts and texts about texts (e.g., reading responses, notes, criticism, reviews) to acquire traction for their own versions of ideas and arguments, whose forms and arrangements attempt to match the ends of a piece of composition. Although there are numerous other ways to represent the many aims of the composition classroom, our (partial) view emphasizes reading as an active, social process for sense-making and meaning-making in educational endeavors.

Thus, what we explored in our classroom study was how these common expectations fared when book technology changed. What pedagogical revisions were invited by the new technology? In what ways did the e-books facilitate status quo practices, and in what ways did they confound and trouble them? Our work with the Sony Reader highlighted three aspects of reading that were, on some level, denaturalized by e-books and their contexts: accessing texts, operating texts, and marking texts. In what follows, we discuss each of these aspects and we comment on the (always) evolving nature of reading and reading matter. We conclude with questions for composition teachers who may be considering using e-books in their courses.

Accessing Texts

Accessing texts is obviously a first-order task for readers, one that has become fragmented and disjointed in the contexts for e-books. On college and university campuses, the distribution channels for print materials are relatively stable and universal. There are well-established routines and procedures for working with libraries, bookstores, and copy centers, which are communicated to new instructors in orientation and beyond and to new students in composition classes and beyond. There are also mature institutional practices for accessing certain types of online texts, including e-books, e-journals, and e-dissertations. As a rule, these practices require users to authenticate themselves with a university ID and password; materials placed on library e-reserves are password protected for students in a course. Under this approach, students can access texts on demand, and in formats that are supported by institutional technologies. Furthermore, the requirements of copyright clearances for texts on e-reserve tend to be handled by librarians or library staff. The benefits of centralized access structures for online texts are not to be minimized.

We were intrigued and surprised by the relationships between the Sony Reader and centralized access structures, ours and those of e-book providers. For students and teachers, these relationships both contracted and expanded access to texts and influenced the ways in which texts were represented and organized for online use. By and large, we noticed access issues from the outside in, from issues associated with options in the Reader bookstore to issues associated with the organizational features of the Reader. Affecting this spectrum of institutional and technical apparatus were our composition pedagogies, which helped to constitute notions of access for our particular explorations of e-books. Despite popular opinion and calls to action, access is not a static or monolithic concept; it comes to mean different things to different people in different contexts.

Options in the Reader bookstore were limited by related market forces. At the inception of our study, Sony had not yet adopted the e-Pub format, which has become something of a standard file format for e-books and their devices. So we could only consider titles that were available in the Reader bookstore. However, as we also discovered through extensive database searches, Sony had not yet established contract relationships with publishers that offer books from the field of rhetoric and composition. The upshot was that Stuart was unable to find compatible titles that were suitable for a graduate seminar, while in the undergraduate course, Michael was restricted to a handful of popular texts on Internet culture. We therefore turned to PDF versions of essays from our library and other information sources to develop reading lists. In profound and unprecedented ways, the content of our courses was provoked by the design specifications of texts and by the strategic role and management of distribution channels.

In the realm of print, access is synonymous with acquisition, but this is not always the case in digital environments. In digital environments, there is the real and continuous challenge of database management, of making files findable in personal collections by both people and machines. Responses to this challenge can be developed by publishers, teachers, and students, all of whom have the potential to assume a role in how files become named and organized in online spaces. If e-book devices were limited to purchased items, then perhaps database management would be less of an issue: Volume matters. But the ease with which people can share and download files expands the scope of accessibility by an order of magnitude. The Reader bookstore, for example, incorporates the content of Google Books, including thousands of free titles in the public domain. Although users can create folders for collections of texts on the PRS-505, this task was less than obvious to students in our courses. Students could not make collections with the Reader software itself; instead, they had to connect the device to a computer via a USB cable and then use the computer’s operating system to create and manage folders. In fact, not a single student organized or reorganized files into personal collections.

In addition, filenames contributed to problems of accessibility. We anticipated this issue with required course texts by using author names for filenames, which could be cross-referenced with the syllabus for bibliographic and contextual information, such as which course units or themes the files were associated with. Students, however, tended to retain the idiosyncratic filenames associated with services like JSTOR (e.g., “354886.pdf”) and Science Direct (e.g., “sdarticle.pdf”), and they often employed names for their own files that became less than meaningful when uploaded to Readers by others in the class (e.g., “ClassHandout.pdf”). For its part, the Reader used two protocols that created initial problems for students: it appended “Microsoft Word” to the front of filenames for .doc files, thus changing the position of these files in alphabetical listings (e.g., “Microsoft Word – Killingsworth.doc”); and in cases where a Microsoft Word file derived from a personal computer, it used the name of the account owner as the author name. After a period of confusion, we discovered that you can override author defaults with the Properties dialog box in both Microsoft Word and Adobe Acrobat. The design of filenames and folders is not trivial to the networked classroom, but it seems absolutely crucial to the accessibility of e-books.

Let us conclude this section with a perspective on accessibility that begins to involve the aspect of reading we discuss next: operating texts. For people with disabilities, access to physical and intellectual resources for educational purposes has been an expanding and ongoing struggle. In many instances, new media technologies have proven to be inhospitable to the blind, to those with low vision, and to those with other special needs—for example, students with learning disabilities (see Goggin and Newell). To use a clichéd expression for the emergent world of e-books, the more things change, the more they seem to remain the same. In fact, e-books complicate access issues by introducing a layer of mediation not required of print books, or at least one that is more complex and abstract than those of technological antecedents. With print books, providing alternatives means (to a great extent) translating texts into Braille or audio formats. Starting to work with these translations is a rather straightforward operation: you open the cover and read in Braille, or press play and listen to the narrator. We are oversimplifying the matter, but our point is that user interfaces for print have become relatively concrete and transparent for students.

In contrast, e-book devices require users to navigate various interface elements in order to start or continue a reading session. The PRS-505, however, did not have audible menus or text-to-speech functions, so neither the device menus nor course texts would have been accessible to blind or low-vision students. This situation has not been rectified in more recent models of the Reader, and the current approaches from other major manufacturers, including Amazon, have not resulted in e-book devices that are fully compliant with the Americans with Disabilities Act of 1990. For this reason, a number of projects (at places like Princeton, Arizona State, Case Western, and Pace) have been challenged by the National Federation of the Blind (NFB) as violations of the right to equal educational opportunities. The United States Department of Justice shares these very real concerns, and thus encouraged American university presidents, in a June 2010 written memorandum, to avoid e-book requirements until e-book devices are compliant with the law. Challenges [http://www2.ed.gov/about/offices/list/ocr/letters/colleague-20100629.html] from the NFB are beginning to appear for course-management systems, which also tend to lack audible menu systems. In sum, the types of access issues we confronted, which encompass technical, pedagogical, institutional, and legal dimensions, are significant, troublesome, and unsettled, and of utmost importance for both social and functional reasons to the composition classroom.

Operating Texts

In a popular video [http://www.youtube.com/watch?v=pQHX-SjgQvQ] circulating on the Internet, a monk from the Middle Ages struggles to understand and operate the then-new media of print, to transition from the affordances of papyrus rolls to those of a fundamentally different technology for expression and literacy work. The monk needs the technician from a “Medieval help desk” to show him how to turn book pages, backward as well as forward, and reopen a book using the back cover. In addition, the monk worries over the permanence of print; he wants to be sure that the text has been “saved” for subsequent use, a concern drawn from the future of digital texts to remediate a representation of the development of literacy. In part, this video is popular—it has been played over 2.5 million times on YouTube—because it spoofs computer support in ways that resonate with typical end-user experiences. For instance, the front-line support system (a printed manual for the new book in the video) presents the same navigation problems as the artifact it documents, effectively rendering the support system useless. What makes the video ingenious, however, is the utter cluelessness of the monk. He is confounded by tasks so mundane to our current period that the tasks appear to be conventional (and unlearned at this point) rather than natural. How in the world could someone struggle with opening a book?

With turning a page? And what could be so hard about mirroring such simple tasks in reverse? Of course, for print-trained readers, including our students, these questions are belied by years of skilled practice with books, papers, and other physical reading materials. The far-reaching routines of print literacy—in schools, homes, and other locations both official and vernacular—have routinized textual operations in thorough ways and habituated readers to their technological dimensions. But conventional patterns can be disrupted, as the success of the video demonstrates. The video has attracted a considerable audience, in no small part, because on some level people can understand and identify with the challenges of learning a new system for literacy activities. Indeed, the operational struggles our students experienced with e-books were really no different in kind than those of the monk, involving relatively basic functions and procedures.

The previous section mentioned a navigation issue associated with accessing texts (audible menus), one that represents a significant barrier for certain populations of students. Navigation was also a usability matter in the contexts for operating texts. For example, for some unimaginable reason, the PRS-505 did not include a search mechanism, making it impossible for students to move within and across texts using their keywords or those from the course materials and e-books. (Likewise, the Web browser Safari for the iPad did not include a search mechanism until version 4.2 of the operating system.) To navigate, students relied on the three sort features of the Reader—title, author, date—and on bookmarks. Although the sort features seemed to work well enough, modeling queries familiar to search engines, they returned lists of titles and authors that overlapped indexical boundaries created from the alphabet: A-C, D-F, G-I, and so on. As a result, students had to train themselves to focus toward the middle of lists to locate the first item in a sort. There was also an issue with the date sort, which was precipitated by our pedagogical practices. Because we uploaded the course texts more or less all at once, at the start of the term, the date sort became rather useless to a comprehensive search of the Reader. In our academic universe, this feature became useful in very particular ways, for queries of near-past activities, to find texts that had been uploaded in the last few weeks or so (over and above that timeframe, who can remember the dates on which files were uploaded to a digital device?). In this manner, the date sort applied more to ancillaries than to core course materials, to files that included handouts for student presentations, discussion questions for texts, and other periodic updates to our databases of class materials. Finally, students had mixed responses to the bookmarks feature. They employed it with success for navigation purposes, but then they often could not recall the reasons why they had created a bookmark in the first place. As a consequence, students wanted to be able to edit and annotate bookmarks and comment on the text fragments associated with bookmarks. That is, they wanted bookmarks and their contexts to contain semantic elements. From our students, a key recommendation for device designers was to enable users to edit and elaborate the navigational features of e-books.

The navigation practices and issues we noticed contributed to challenges in another operational area: spatial orientation. It is no news to point out that it can be troublesome for readers to establish and maintain their conceptual bearings in online texts. Indeed, back in 1986, for example, Christina Haas and Dick Hayes reported on empirical studies of graduate students and faculty in the humanities who preferred to print computer-based texts for certain complex tasks, including critical reading. Haas and Hayes noticed a causal link between the spatial representations people inevitably develop of texts and the material devices that facilitate and support literacy activities, especially computer monitors and visual aspects of the page and screen. Their findings, in short (and in part), suggested that small and/or low-resolution monitors may be inferior to advanced displays and printed pages for text comprehension and retrieval in tasks involving a considerable amount of reading. Researchers from various fields arrived at a similar conclusion, including those who studied Palm Pilots and other predecessors to e-book devices in educational settings (see Marshall and Ruotolo; Waycott and Kukulska-Hume). Although display systems have improved tremendously over the past twenty -five years, readers continue to describe problems with spatial orientation. Our students were no exception.

We cannot attribute these problems to a low-resolution screen. The Sony Reader (and Kindle, Nook, and many other e-book devices and some smartphones) contains a vivid display system that imitates the high-contrast, high-resolution experience of reading printed texts. The real beauty of the system, which is built on electronic ink technology, or E Ink, is that it delivers a quality viewing experience while drawing very little electrical power from the device itself. Users can turn 7,500 pages or so before the Reader needs to be recharged. And because the display system is not backlit like the iPad, Nook Color, and other devices that have LCD or LED screens, it is readable in direct sunlight. All in all, our students praised the high quality of the monochromatic screen. (Color E Ink [http://www.eink.com] is now available and may soon afford a comparable reading experience).

The size of the screen, however, coupled with certain operational features and conditions of the PRS-505, seemed to be a contributing factor to problems with spatial orientation. Recall that we did not assign texts that had been modularized for hypertext or designed for the small screen. Instead, we asked students to read essayistic pieces typical of composition and rhetoric classes—and of classes across the disciplines. Students read these extended (15-30 page) pieces to support a variety of writing projects, and the pieces required them to engage richly developed ideas and connect concepts across numerous text files. We loaded around 60 electronic articles, including argumentative essays and empirical studies, on the Readers for graduate students, and the content for the undergraduates was also widely distributed. Like Haas and Hayes, we were interested in academic reading activities that require patient, careful deliberations and the ways in which those deliberations are mediated and supported. According to students, there were noticeable mismatches between task expectations for our courses and the technologies of the PRS-505.

More than a few students noted that it was often difficult to discern hierarchies in texts, follow the threads of extended arguments, preview and reread texts, estimate progress through texts, and/or associate ideas with authors. These basic tasks were not always well supported by the material realities of the device, which yielded three to five sentences per screen (in middle-zoom mode) in a

virtual space with minimal, and predominately linear, operational controls, and required a processing time delay of two to four seconds for navigational commands. This lag could feel like a lifetime in the context of certain active-reading tasks, so students would sometimes abandon tasks like following footnotes, which were not hyperlinked in either the e-books or PDF files, or reviewing passages from earlier pages or other texts. In conceptual terms, these realities produced a more flattened discursive space, and an extensive one at that, in which arguments and authors became entangled and jumbled together. The end results were not thought-provoking textual mash-ups, intertextual interpretations born of serendipitous human-machine collaborations, or new and different options for textual engagement, but troubled and confounded practices for reading with and against the grain of complex texts. As the next section on marking texts discusses, students attempted to solve orientation and retention problems with a variety of personal strategies.

The final issue relates to the level of operational ambitiousness demonstrated with the Readers. The devices themselves were the property of our academic institution; students borrowed them—and the uploaded e-books—for use over a one-semester period. Although students were encouraged to be industrious and to make the Readers their own for the term, we observed rather conservative operational actions and activities, which in some circumstances functioned as impediments to educational development. Generally speaking, students did not deviate from the technical routines required by our assignments, so they did not configure or employ certain features of the Reader that would have been instructive to explore, such as the feature for importing RSS feeds. In the same vein, students were timid about trying third-party software like Calibre, which provided e-book management functions that were useful but not officially supported by the Sony help center, including functions for manipulating file formats. This guarded behavior, in some instances, extended to the texts themselves. In addition to semantic problems, students limited the number and scope of bookmarks because they were concerned about their ability to access them in the future. The relationship between ownership and use raises a real question for e-book rental programs and university initiatives that lend e-book devices: What strategies can teachers use to encourage students to possess, personalize, and test institutional technologies in ambitious ways? Our experiences suggest that answers to this question will need to consider several areas of concern. First, students expected the texts and metatexts to be exportable to other writing and reading spaces and reusable in other projects. They displayed little patience for the types of interoperational problems signified by the Mac versus PC wars and continued by battles over digital rights management. Second, students worried that they might be exposed to personal financial liabilities if the assigned devices were broken, lost, or stolen. Although students should take responsibility for borrowed equipment, the equipment was required for participation in our courses—and the undergraduate course was a general education requirement. What should a user agreement look like for students who are required to borrow institutional technologies? Third, we were surprised by the extent to which our pedagogies domesticated operational uses of the Reader. In our next effort, we will include activities that encourage students to explore e-book environments in a more open-ended fashion.

Marking Texts

If pressed about the affordances of print technologies, digital evangelists will often reference the ability to mark-up texts. It is not easy to discount or dismiss the flexibility and versatility of pencils and pens as ordinary writing instruments. Although these instruments are no more natural to learn and use than a keyboard or mouse (see Baron), they lend themselves well to certain discursive practices that are essential to careful reading and reflection. For example, with a pen or pencil, users are not constrained by the coordinates or characteristics of a page or by a predetermined set of symbol choices. One can mark in any direction or orientation, and in an infinite number of ways. As a result, people can develop highly personal methods of textual annotation. Consider our own idiosyncratic approaches: One of us likes to place the capital letter Q next to paragraphs containing key questions or theses, draw boxes around first-level headings, and write notes lengthwise in the gutter area; the other prefers to summarize key points at the top and bottom of pages, reinforce the cuing devices of authors, and note authorial connections in the margins. For us, and numerous other readers in educational settings, such practices constitute a key component of interpretive engagement, knowledge acquisition, and invention.

The advent of computer-based hypertext encouraged readers to extend their roles by making navigational choices and rewriting original content, but these expansive capabilities did not remove the fundamental need to annotate texts. As is often the case with literacy technologies, new developments exhibit the features of both evolutionary and revolutionary change, simultaneously accommodating and resisting status-quo approaches to textual consumption and production. Although hypertext enabled new and hybrid forms of annotation, there has also been an understandable impulse to investigate online support structures for certain modes and practices from offline contexts. Two areas in composition bear out this claim: electronic grading and peer review. From the outset, teachers interested in these areas have been sensitive to issues of textual markup, routinely considering whether, or to what extent, computers can incorporate traditional grading and editing symbols and permit in-line and marginal comments. In his annotated bibliography of composition software developed in the 1980s, Strickland listed five “representative” programs that “allow comment after critical reading” (29). Teachers of a certain generation may recall their titles: Comment, Daedalus, MarkUp, Prep Editor, Respond, Seen. Programmed by academic faculty as well as commercial software firms, such environments did not work to jettison old approaches for new ones. Instead, they reinscribed particular theories and practices that were considered to be effective and professionally responsible. The user interfaces displayed features with new possibilities, but the programmers did not (and could not, really) operate in a pedagogical vacuum.

Aside from bookmarks, Sony did not build features into the PRS-505 for marking electronic texts. At first blush, this absence seemed to us to be a significant oversight. After all, both stand-alone and embedded annotation tools have been available for decades. On reflection, however, this circumstance is a rather predictable one in the context of patterns of adoption and diffusion for mainstream literacy technologies. As with the Kindle, Nook, iPad, and most other e-book devices and tablet computers with e-book capabilities, the PRS-505 was not created exclusively for higher education. It was targeted at a mass consumer market and then promoted to secondary markets using a variety of technical and social strategies. Although broad and specific contexts are often mutually constituting and inseparable, the practices and motivations of their audiences can be at odds with one another. This rhetorical clash was obvious from the onset of the project, and for a brief period of time we debated the efficacy of studying a device designed for general and leisure reading in an academic setting. A few realities, however, encouraged us to proceed with the investigation. A crucial one was our recognition of the pervasiveness of the situation: Students are constantly contending with literacy technologies that were developed for other contexts or for multiple contexts (an obvious example is Microsoft Word). How might students appropriate the capabilities and features of an e-book device for composition work? This is a new and open question for teachers. Also, we thought it would be profitable to examine an early version of the Reader and provide Sony with concrete feedback: participating in usability evaluations is an organized way for teachers and students to help effect change in future generations of hardware and software.

Our students were interested in mark-up features as aids to memory and recall, especially for face-to-face discussions, and as invention mechanisms for preparing course papers and integrating course readings into subsequent writing endeavors, such as comprehensive exams at the graduate level. They divided their mark-up activities, which for the most part were not supported in a direct manner by the PRS-505, into distinct categories: bookmarking pages, highlighting texts, annotating texts, and note-taking. These activities were denaturalized in pointed ways by our experiences with the device. In response to disruptions in their mark-up techniques, students mobilized a variety of disparate approaches. Some abandoned the use of bookmarks, highlights, annotations, and notes, opting instead to read the texts without making any marks or comments whatsoever. Others employed the bookmarks feature alone, and in a rather cursory fashion (recall the problems with bookmarks enumerated earlier). Still others discarded the device for the capabilities of print-outs or a computer; after a trial period that was disconcerting and even a little maddening, a handful of students gave up on the PRS-505 as a device for active reading. In short, these approaches reverted to familiar practices or attempted to do without them. They did not, in other words, aim to reinvent reading routines.

In contrast, many students devised new methods for marking texts, essentially hacking sociotechnical contexts to produce more hospitable environments for their discourse practices. These methods were simple and complex, and involved notecards, sticky notes, a notebook, and/or a computer. The simple methods were effective at reproducing a version of an established literacy routine: Students wrote down quotes in a notebook instead of underlining them, for example, or took notes in a word-processing program rather than in the margins of a book. Such seemingly superficial recreations, however, did more than just enable an old activity in a new medium. They also transformed the activity itself in evident ways, and in ways considered to be both helpful and potentially harmful. For example, students noted that writing down quotes served as an aid to retention, but also that they copied fewer longer quotes because it was more arduous than highlighting or underlining passages. The complex methods created relatively novel discursive systems for addressing the absence of mark-up features. In one fashion or another, these methods attempted to coordinate multiple interfaces—print and digital—that actively worked to incorporate the PRS-505. Students used word-processing files to elaborate on bookmarks, notepads and notecards to associate page numbers with comments, sticky notes (attached to the inside of the device cover) to record quick reference information like a website URL, and more. In devising such approaches, students drew on the advantages of the PRS-505 while structuring parallel time-space frames for related activities: The mark-up challenges we heard about the most had to do with designing workflows to reintegrate texts and metatexts, which in print tend to have a parasitic relationship (notes are on/in texts). Both the simple and complex methods of appropriation were the result of students being troubled by a system in which certain learned elements of active reading became externalized and unsupported.

Of course, these sorts of hacking behaviors are anywhere and everywhere in educational settings, for mismatches between the embodied assumptions of literacy technologies and those of readers and writers will always exist. To some extent, students and teachers can mediate these mismatches with pedagogical approaches, institutional mechanisms (such as policies and procedures), and hybrid forms of support for reading that leverage the features of a variety of media. Teachers, however, will also want to pay attention to the emergent landscape of e-book devices and the available options for marking texts. In this landscape, we would make a distinction between single-purpose devices like the Sony Reader and multi-purpose devices like the Apple iPad, which includes an e-book program plus many other programs (or apps). The affordances of single-purpose devices have indeed been expanding: current versions of the Sony Reader—there are three different models—include features for highlighting and searching texts, taking notes with a stylus or keyboard, exporting notes, and navigating with a touch screen. The Nook by Barnes & Noble also has a Web browser. In addition, the Amazon Kindle added features for sharing notes publicly and reading public notes and highlights. Multi-purpose devices can function in this very manner: There are well-known apps that emulate the Kindle and Nook on the iPad. But with the iPad there are numerous other apps that can be useful to active readers. Although one can certainly mark-up texts using the current features of single-purpose devices, productivity apps like iAnnotate PDF, GoodReader, Stanza, and Evernote provide an additional range of possibilities, including making audio comments, creating searchable tagging systems, developing document databases of texts and metatexts, and other tasks that integrate writing and reading in more thoroughgoing ways. As a result of these vastly different options, features for marking texts have become criteria for decision making for

composition teachers interested in adopting an e-book platform. The world of print has not and does not present a comparable set of decisions.

Conclusions and Questions for E-Book Adoption

Would you purchase a Sony Reader? This was our final interview question for both sets of students, and their responses, which were mainly negative, were not surprising to us in the slightest. In general, students did not welcome the ways in which the PRS-505 defamiliarized classroom activities and the reading practices they had developed—over a period of years—for school settings. The device and its contexts were not considered to be avenues for exploring new directions in literacy or future instructional challenges. Instead, they were viewed as barriers to the perpetuation of productive habits of minds and bodies that students relied on to negotiate and manage educational endeavors. A paramount issue was the lack of alternative mark-up features to support active readers and their tasks. Although word-processing programs confounded the routines of those used to typewriters and pens and pencils, they provided (for better and worse) an environment in which students and teachers could reimagine structures for literacy work, including routines involving printed texts. The PRS-505 had a number of impressive hardware capabilities that are crucial to positive e-book experiences, but its software features were not attuned enough to reading practices in college composition classes. In the final analysis, student appropriation strategies could not bridge this gap.

We should note, too, that the conclusions of students took into account the roles and functions of other electronic devices. In this day and age, students are likely to own multiple devices for consuming, producing, and managing digital content: computers of various forms, cell phones, MP3 players, still and video cameras, and more. How many devices are students willing to purchase and learn? What is the tipping point for dedicated e-book devices? Proponents are quick to point out that the discounted prices of e-books can return the cost of a device in three to four semesters, which is true. This calculus, however, does not factor in what students are spending for other digital devices, high-speed Internet access, data plans for cell phones and other devices that connect to cellular networks, subscriptions to services like Netflix and Rhapsody, and campus computing fees (the campus computing fee at Penn State is $236 per semester). The larger financial picture encouraged our students to question the necessity of dedicated e-book devices with strict systems for digital rights management. Although students could access course PDF files on computers and cell phones, the items from the Reader bookstore could only be operated with the PRS-505. In contrast, students can read Kindle book editions not only on Kindle devices but also on cell phones and computers, including the iPad and other tablet computers that are compatible with the Kindle software (and that make it easier to keep associated work in the same attention space). The debate between closed and open platforms will no doubt continue in earnest. If our experiences are any indication, students will be alert to arguments that take into consideration their full range of digital activities, academic and non-academic. In financial and functional terms, there are limits to what students can and will invest in literacy technologies.

There were other external factors that contributed to our impressions and those of students, most of which have already been mentioned: the activities we asked students to perform, their own literacy practices and habits, our own literacy practices and habits, institutional policies and protocols, publisher offerings, representations of e-books in educational settings and in publications for teachers, and more. Impressions of the PRS-505 from our courses, then, must be located in a particular time and place. This rhetorical perspective is all too often absent from software and hardware reviews. The typical review reports on an experience or two with a technology and then deems it fit or unfit for all of higher education. Our experiences with the PRS-505 were less than stellar, but we can imagine other courses in which it might have faired better with students and teachers. Situated contexts will be central to the ways in which e-books and their devices are interpreted, used, and evaluated for academic purposes.

To help composition teachers reason through situated contexts, we conclude with a series of questions for e-book adoption. Although far from exhaustive, these questions encourage teachers to consider a wide range of technological, pedagogical, and institutional issues that help determine e-book use in composition courses.

Technological Questions

- What assumptions about reading does the device instantiate?
- How does the device support active readers?
- What are the navigation features for e-texts? Are they understandable to print-trained readers? Can they support class discussions?
- What are the marking features for e-texts? What do they enable and encourage? Disable and discourage?
- Can students export their metatexts (e.g., notes, highlights) for use with other literacy technologies? In what ways?
- Which software and hardware systems do you use to support course activities? Is the device compatible with these systems? Does it need to be?
- How does the device handle digital rights management? Is the system proprietary or more open?
- Is the device accessible to students with disabilities? Does the device comply with the Americans with Disabilities Act of 1990?
- Are there add-on components that can expand the capabilities of the device for active readers?

Pedagogical Questions

- What are your assumptions about reading? About writing?
- In your courses, how are reading and writing connected? Reading and learning?
- What do you expect students to do with and to course texts?
- What are the reading practices of students in your courses? How do they engage texts?
- Are your course texts available in an e-book format? If not, are there viable alternatives?
- Have you invented a naming scheme for course files? Can it be extended to e-books?
- What are the workflows for your course activities? Can they accommodate an e-book device? Will they need to be reorganized?
- What is your stance on the relationship between pedagogy and technology? One-directional? Dialectical? Other?
- Does your pedagogy include room for open-ended explorations of technology?

Institutional Questions

- Does your institution lend e-book devices or devices with e-book capabilities? What does the student user agreement stipulate? Will students need to create personal accounts (on iTunes or Amazon, for example) to manage the devices?
- How might you encourage students to possess, personalize, and test institutional technologies in ambitious ways?
- Does your institution operate an e-book rental program? What are the offerings in composition?
- Does your institution provide access to e-texts? Are there library protocols for downloading and using them?
- To what extent can you populate an e-book device with library holdings? Does your library subscribe to e-versions of texts that are central to composition?
- How does your institution handle copyright clearances for e-texts? Is there an e-reserve system? Can it be accessed with an e-book device?
- Are there institutional policies that address e-book issues, such as accessibility for the disabled and digital rights management?
- Is there a unit on campus that can provide training services for e-book devices? Does the training cover critical as well as functional concerns?
- Is there a unit on campus that can provide technical support for e-book devices?
- Are there others at your institution who might be interested in e-book initiatives? Are there ways to share costs and resources?

Works Cited

Baron, Dennis. *A Better Pencil: Readers, Writers, and the Digital Revolution*. New York: Oxford UP, 2009. Print.

Bauman, Zygmunt, and Tim May. *Thinking Sociologically*. 2nd ed. Malden, MA: Blackwell P, 2001. Print.

Bolter, Jay David. *Writing Space: The Computer, Hypertext, and the History of Writing*. Hillsdale, NJ: LEA, 1991. Print.

Goggin, Gerard, and Christopher Newell. *Digital Disability: The Social Construction of Disability in New Media*. New York: Rowman, 2003. Print.

Haas, Christina, and John R. Hayes. “What Did I Just Say? Reading Problems in Writing with the Machine.” *Research in the Teaching of English* 20.1 (1986): 22-35. Print.

Johnson-Eilola, Johndan. *Nostalgic Angels: Rearticulating Hypertext Writing*. Norwood, NJ: Ablex, 1997. Print.

Marshall, Catherine C., and Christine Ruotolo. “Reading-in-the-Small: A Study of Reading on Small Form Factor Devices.” *Proceedings of the 2nd ACM/IEEE-CS Joint Conference on Digital Libraries*, Portland 13-17 July 2002. Ed. Gary Marchionini. New York: ACM, 2002. 56-64. Print.

Strickland, James. “An Annotated Bibliography of Representative Software for Writers.” *Computers and Composition* 10.1 (1992): 25-35. Print.

Waycott, Jenny, and Agnes Kukulska-Hume. “Students’ Experiences with PDAs for Reading Course Materials.” *Personal and Ubiquitous Computing* 7.1 (2003): 30-43. Print.

Notes

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