Doing the Reading
Technology’s Role in Reshaping Reading in the Academy

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ABSTRACT
Reading is an activity in which billions of people engage. However, the amount and type of individual involvement shifts over time and circumstance. This chapter explores the nature of reading in current academic contexts, focusing on American higher education. While digital technologies play a role in shaping the length, volume, and nature of texts students are now reading, other relevant variables include the changing character of students themselves, along with alterations in faculty practices.

I. Reading as a Cornerstone of Education
People read for a multitude of reasons: for amusement, to pass the time, for inspiration, and to learn. Not surprisingly, first learning to read and then engaging in reading have long been cornerstones of both informal and formal education. Even with the development of audio and visual communication media (ranging from radio and television to podcasts and TED Talks), reading the written word remains a consistent component of educational curricula from primary grades through graduate school.

And yet, the character of reading – and readers – evolves with time. Changes in educational opportunity vastly expanded the potential cohort of readers. The same is true of technological developments, including not only the rise of printing in the West but also production of inexpensive paper. Growth of the modern newspaper in the seventeenth century and rise of the novel in the mid-eighteenth century provided new texts to consume, as
have the creation of science fiction, Gothic romance novels, and now blogs and social networking sites.

As both technology and educational opportunity continue to evolve, it becomes important to understand the character of reading today. Among the questions we need to ask are

- How are opportunities for reading on digital platforms (such as computers, eBooks, tablets, or mobile phones) affecting our reading patterns?
- What kinds of texts are today’s readers gravitating towards and, as a result, are authors and publishers looking to produce?
- How do contemporary readers approach texts and in particular, how much concentrated mental effort do they invest?
- Do the growing calls on students’ time impact their hours available for academic study and, in particular, for reading?
- What are the implications of both pervasive digital technologies and changes in the undergraduate student body for faculty roles as teachers and researchers?

For many years, I have been examining the relationship between technology (especially digital technologies) and other aspects of our lives, including the language we use and the ways technology influences our individual and interpersonal lives (BARON 2008). Recently, I have focused on readers’ practices and preferences with regard to using digital versus print text (BARON 2015). In this chapter, we will explore how questions of what and how we read impact our roles as students and faculty in higher education.

Before we begin, a few caveats are in order. First, the discussion is framed from an American perspective, since this is the context I know best. Second, my focus is on higher education (“the academy”), though the same issues are relevant for lower education. Third, when I talk about reading, I have in mind substantial continuous linear text, not digitally-native books or short online postings.

II. The Character of Reading Today

Producing accurate statistics on how much literate people have read in the past or are reading today is highly challenging. On the one hand, the US Bureau of Labor Statistics (2016) has
reported that of the more than 6 hours 20-24-year-olds devote to leisure or sports activity each day on weekends and holidays, they average less than 9 minutes on leisure reading. On the other hand, it makes intuitive sense to assume that people who know how to read are probably processing more words per day than they did, say, fifty years ago, thanks to the barrage of digital media continually accosting us, from trailers on the bottom of television newscasts to blogs, text messages, and online social media posts. However, many of these strings of words fall short of the “substantial continuous linear text” our current examination of reading is addressing.

There has been a long-running trend to make book-length text increasingly available to readers by lowering its price. Paperback editions are uniformly less expensive than hardback counterparts. When Amazon first introduced the Kindle, it priced eBook versions of bestsellers at a uniform $9.99 USD, which was often below the price of the paperback. Independently-published works of fiction (a major growth industry for eBooks) average from $2.99 to $3.99 USD, compared with traditionally-published books that retail for two or three times that amount (WRITTEN WORD MEDIA 2016).

Selling a book, at whatever price or in whatever format, hardly guarantees it will be read. Peter Stallybrass has argued that outside of novels and detective stories, selective or incomplete reading has been the norm since the development of the codex (STALLYBRASS 2002, pp. 46-47), while Hugh Amory has suggested that “perhaps the majority of books ever printed have rarely been read” (AMORY 1996, p. 55). The company Kobo, which markets eReaders and eBooks, has reported statistics on eBook completion rates (measured by page turns) by British readers. While only 28 percent finished Solomon Northrup’s Twelve Years a Slave and only 44 percent made it to the end of Donna Tartt’s Pulitzer Prize-winning The Goldfinch, 83 percent completed Casey Kelleher’s self-published Rotten to the Core (FLOOD 2014).

Two other important questions to ask about the nature of reading today concern the length of “full-length” texts being read (and written) and the complexity of texts readers are tackling. We will address both of these issues in due course, arguing that a constellation of factors, including the rise of digital reading, are contributing to shorter and less complex reading assignments in academic settings.

III. Digital Reading
Readers have accessed texts on digital screens for several decades, with usage growing since popularization of the World Wide Web, internet browsers, and email. However, it was the appearance in late 2007 of Amazon’s Kindle that marked a watershed in reading habits. Increased production of eBook titles (including bestsellers such as *Fifty Shades of Gray*) led to triple-digit eBook sales growth for several years. In the US, eBooks now command roughly 20 percent of the book market, depending upon how the numbers are calculated.

**A. Prior Research Comparing Reading Platforms**
Since the early 1990s, researchers have been comparing how people read on digital screens versus in print. The original studies suggested comprehension was better and reading speed faster in print, though we must remember that screens at the time were of comparatively poor quality and users’ experience reading onscreen was limited. Contemporary studies now largely indicate that among adult study participants, comprehension levels are on par in the two media, though when asked about their perceptions, participants commonly report believing they learn more and remember more when reading in print. For a review of this prior research, see BARON/CALIXTE/HAVEWALA (under review).

While most of the prior research has focused on cognitive measures, a factor repeatedly surfacing in surveys of students is that differential cost between print and electronic books often is the deciding factor, not preferred learning platform. In the US, a study by the NATIONAL SURVEY OF STUDENT ENGAGEMENT (2015) found that 40 percent of college seniors reported that “very often” or “often” they didn’t purchase required course materials because of cost.

**B. Cross-National Study of University Student Reading Habits and Preferences**
My own research has focused on the reading habits and preferences of university students. Using convenience samples, I surveyed a total of 429 students in the US, Japan, Germany, Slovakia, and India, ranging in age from 18-26 (mean: 20.9 years old). Data were collected between Spring 2013 and Spring 2015.

The first part of the survey consisted of a set of choice questions (e.g., “Are you more likely to re-read a book or article if it is in hardcopy [=print]? On a digital screen? Equally
likely?”). Many of the questions distinguished between reading for academic purposes versus reading for pleasure.

The second portion of the survey asked four open-ended questions:

- What is the one thing you like most about reading in hardcopy?
- What is the one thing you like least about reading in hardcopy?
- What is the one thing you like most about reading onscreen?
- What is the one thing you like least about reading onscreen?

Responses from these questions were coded into more than fifty categories, clustered under the major headings Emotional/Aesthetic, Physical, Cognitive, Access to Material, Convenience, and Resources. In addition, participants were invited to offer any additional comments about their digital or print reading habits or preferences.

Detailed results from the study are reported in BARON/CALIXTE/HAVEWA (under review). Here we summarize some of the major findings.

1. **Text Length**

Participants were asked four questions regarding reading medium preference when it came to the length of the work: “When you are reading for schoolwork/for pleasure and the text is short/long, would you rather read in hardcopy or on a digital screen?”

Results with regard to short texts were mixed, both regarding schoolwork and pleasure reading. However, when it came to reading long text, 86 percent preferred hardcopy for schoolwork and 78 percent for pleasure.

2. **Multitasking**

Two choice questions concerned multitasking: “When you are reading in hardcopy/on a digital screen, how often are you multitasking?” The options were “very often”, “sometimes”, “occasionally”, and “never”.

Combining together responses of “very often” and “sometimes”, the responses were as follows:

<table>
<thead>
<tr>
<th></th>
<th>All Countries</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardcopy</td>
<td>41%</td>
<td>26%</td>
</tr>
<tr>
<td>Screen</td>
<td>67%</td>
<td>85%</td>
</tr>
</tbody>
</table>
The higher amount of multitasking by US participants (compared with the total cross-national cohort) probably reflects the fact that more US participants reported doing their digital reading on laptop computers, on which multitasking is easier than on a tablet or mobile phone.

3. Convenience
Information about the importance of convenience as a basis for preferring reading onscreen or in print came from the coded “like most”/“like least” responses. Regarding what they “liked most” about reading on digital screens, 25 percent explicitly praised convenience, with another 41 percent mentioning ease of access to material, functionality of digital devices, ease of searching for words or information, or using the internet. By contrast, 43 percent of “like least” responses about reading in hardcopy were complaints about lack of convenience.

4. Cost
Concerns about the price of books were reflected in responses to the two choice questions regarding cost: “If cost were identical, in which medium would you prefer to do reading for schoolwork? For pleasure?”

When asked about schoolwork, 87 percent said they preferred hardcopy. This response is consonant with reports from many other studies (e.g., Ji/Michaels/Waterman 2014). When my survey inquired about reading for pleasure (again, if cost were the same), 81 percent chose hardcopy. However, in their “like most”/“like least” responses, as well as in their additional comments, a number of students voiced feelings of conflict in choosing between media (e.g., “I like that digital screens save paper but it is hard to concentrate when reading on them”). More than two dozen respondents complained that print wasted monetary resources, while others commented on the higher cost of print books.

5. Concentration
Ability to concentrate while reading is a key component of learning. The survey asked, “On which platform is it easiest to concentrate on your reading (not get distracted or multitask)?” Choices included hardcopy, desktop or laptop, tablet, eReader, or mobile phone. The question did not distinguish between academic and pleasure reading.
Hardcopy was the overwhelming choice: 92 percent. In addition, for the “like least” question about reading on digital screens, 20 percent overall mentioned distraction or lack of concentration. In the US, 43 percent voiced these complaints.

IV. What and How Do We Read?
Results from my cross-national survey suggest that new digital technology presents university students with some advantages (such as convenience) as well as potential challenges (particularly regarding concentration). However, the growing availability of digital texts onscreen is having significant effects on both the nature of the texts we read (and write) and the mental approach we take to them.

A. The Nature of Texts Being Read
We focus here on two issues. The first is text length and the second is the nature of fiction.

1. Length
For at least the past three centuries in the West, readers (and the authors who furnish them with texts) have been devising ways of shortening the amount of material to be consumed. In the eighteenth century, a continuing wave of encyclopedia projects provided comparatively short précises on a vast array of topics. Other eighteenth-century initiatives included abridgments of Samuel Richardson’s lengthy novels, compilations of anthologies, the rise of periodicals, and establishment of the book review as a short-form overview of actual books. (For a review of textual shortening devices, see Chapter 3 of BARON 2015.)

The twentieth century brought its own length-driven innovations. The best known in the US was Reader’s Digest Condensed Books. For the academic realm, collections such as CliffsNotes, then Monarch Notes, and now SparkNotes offer students quick alternatives to actually reading Macbeth, War and Peace, or the Critique of Pure Reason. Academic presses are selling individual chapters of books, as well as creating series such as Princeton Shorts, Stanford Briefs, and Oxford University Press Very Short Introductions. Commercial publishers like Arcturus offer abbreviated reads such as The 15 Minute Economist or the 15 Minute Psychologist.
While the move to limit the amount of text people are reading is not new, digital technology accelerates the trend. Here are but two examples of current “publications” available online:

- **BLINKIST (n.d.):** “Blinkist takes great works of non-fiction and distills them into powerful, made-for-mobile units. Our blinks, 2-minute-reads built around memorable key messages, give you the main concepts of an entire book in 15 minutes.”

- **SNACK READS (n.d.):** Snack Reads offers “bite-size[d] ebook[s], perfect for your lunch break, your commute, or right before bed”.

A related question regarding book length is whether readers (here, especially university students) actually read entire books. Speaking at the Phi Beta Kappa Triennial meetings in 2006, Katherine Hayles (now of Duke University) argues they don’t. In the same vein, Jo Brewis (from the University of Leicester) says that “recommending whole books would be rather daunting for [our students]” (Reisz 2016). One of my own students informed me several years ago that books are only inflated versions of articles.

What is so challenging for today’s students about reading long-form? Later we will consider the question of time availability. But part of the challenge – now and in the past – is those long descriptions (that have characterized fiction) and detailed data, argumentation, and recapping (that are typical of much non-fiction). Yes, working through such text often requires patience. However, long texts offer mental breathing room – to reflect on characters and their fate, to mull over and revisit an author’s arguments.

2. **Fiction**

While the preponderance of academic reading (outside of literature programs) involves non-fiction, works of fiction constitute a very large proportion of textual consumption among the reading public. However, not all fiction contains the same level of complexity or impact upon readers.

Scholars distinguish between literary fiction (such as the writing of Jane Austen, which focuses on character development and aesthetics) versus genre fiction (such as romance novels or science fiction, which is typically characterized by formulaic plots and focus on
single topics. In the words of the writer E.M. Forster (2002 [1927]), literary fiction constructs “round characters”, while those in genre fiction are more “flat”.

Research by contemporary psychologists suggests that complexity of characters (and plot) impacts not just literary sensibilities but our capacity for developing interpersonal empathy. More specifically, engagement with literary fiction (with its “round” characters) positively predicts “ability to infer and understand others’ thoughts and feelings” (Kidd/Castano 2016). That is, literary fiction fosters an understanding of the mental states of individuals. (Kidd and Castano hypothesize that “genre fiction, with more stereotypical or stock characters, may boost” ability to navigate the social world.)

In looking at the potential impact of literary fiction on readers, it will be important for researchers to ascertain how much reading of literary versus genre fiction readers are doing. Equally useful will be compiling statistics on whether availability of eBooks (especially the profusion of self-published eBooks) is shifting the balance towards heavier reading of genre fiction.

**B. Approaching Texts**

We move now from thinking about texts themselves to the ways in which readers approach them. Many years ago, in a book entitled *How to Read a Book*, Mortimer Adler (1940, p. 110) argued that reading is serious business:

> The most direct sign that you have done the work of reading is fatigue. Reading that is reading entails the most intense mental activity. If you are not tired out, you probably have not been doing the work.

My own experience in contemporary American higher education suggests that today, many readers are not so much “reading” books as “using” them. Instead of working through entire books or even long stretches of them, students and faculty alike increasingly locate specific words, quotations, or small sections they wish to refer to. Yes, such selectivity was possible in the past, through skimming or use of a book's index. Today, however, availability of digital texts not only simplifies the search process but curbs natural opportunities to happen upon other portions of the text we might end up reading.

At all levels of education, we can think about students approaching a text with one of two mindsets. The first, commonly known as “deep reading”, can be thought of as
The array of sophisticated processes that propel comprehension and that include inferential and deductive reasoning, analogical skills, critical analysis, reflection, and insight (Wolf/Barzilai 2009, p. 33)

The second, which has been dubbed “hyper reading”, is a strategic response to an information-intensive environment, aiming to conserve attention by quickly identifying relevant information, so that only relatively few portions of a given text are actually read (Hayles 2012, p. 166)

While deep reading has been a standard against we have traditionally measured educational achievement (even though sometimes honored in the breach), digital technologies are reshaping user expectations regarding how much time (and effort) actually to devote to reading. A study of graduate student and faculty reading habits online suggested that “It almost seems that readers go online to avoid reading in the traditional sense” (University College London 2008).

While deep reading and hyper reading are two ends of a spectrum, there are obviously points in between. Literary scholar Natalie Phillips (2015) compared fMRI scans of PhD students in literature who read passages of Jane Austen’s Mansfield Park under two different conditions. In the first, participants were asked to do a close reading of the sort they might undertake for an academic class (essentially, deep reading). In the second, they were instructed to simply read for pleasure. The imaging studies revealed that while engaged in close reading, participants evidenced increased blood flow in more diverse areas of the brain, including those involving executive functions. Phillips concluded that “It is not only the books we read, but thinking rigorously about them that is of value, with literary study engaging diverse regions of the brain”.

**V. Students and Faculty**

In recent years, the US has seen a decline in the number of university students studying the humanities, including cores fields such as literature, history, classics, and philosophy (American Academy of Arts and Sciences 2016). While the decline has obvious implications for the number of students doing serious reading of literary fiction, we need to ask whether deep reading of non-fiction might also be in decline.
To help answer that question, I will be undertaking a comparative analysis of how university course syllabi have evolved in the US over the past twenty years. While answers are not yet available, we do have data on changes in the number of hours university students report studying in general and reading in particular, along with indicators of how else these students are spending their time.

**A. How US University Students Spend Their Time**

For more than fifty years, various US organizations have been surveying university students. A study done in 1961 (Project Talent) reported that full-time first year university students indicated they averaged 24 hours of studying per week. Of these students, 67 percent reported studying more than 20 hours per week. Twenty years later, in 1981, the National Longitudinal Survey of Youth (which summed across undergraduates at all levels) found the number of reported weekly study hours to be 20, with only 44 percent of students indicating they studied more than 20 hours a week. In its 2004 sample, the Higher Education Research Institute survey of college seniors indicated an average study time of 11 hours per week, with only 13 percent reporting more than 20 hours weekly (see Babcock/Marks 2011 for details and sources; see McCormick 2011 for analysis).

A more recent data source is the National Survey of Student Engagement (NSSE), which every two years surveys first year students and seniors on a wide range of issues relating to university life. The most recent survey (conducted in Spring 2016) found that while first-year students reported spending about 16 hours each week “preparing for class” (defined as “studying, reading, writing, doing homework or lab work, analyzing data, rehearsing, and other academic activities”), the average for seniors was half-an-hour less. In a follow-up question, students were asked what proportion of that preparation time was spent on assigned reading. On average, the answer was about half, that is, between 7 and 8 hours weekly.

What else are students doing with their time? Again, drawing upon the 2016 NSSE results, their days are filled with a host of other activities and responsibilities. Adding in 15 hours per week for attending classes (and moving between classes), here is a summary of responses from seniors:

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>HOURS WEEKLY</th>
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</tr>
</tbody>
</table>
In class 15
Preparing for class 14
Co-curricular activities 5
Paid work 15
Volunteer work 3
Relaxing 11
Caring for family members 5
Commuting to school 4

Those hours total 72 per week.

If one of those classes is an internship, the student might swap out anywhere from 1 to 6 credits of class time for an internship. In the US, it is now very common for students to do internships. According to the National Association of Colleges and Employers (2015), 63 percent of bachelor’s degree graduates in 2015 had been involved in an internship during their undergraduate career. By comparison, as recently as 2007, less than about 35 percent of those graduating had done an internship (National Association of Colleges and Employers personal communication). In earlier years, the numbers were (anecdotally) far smaller.

At my own university, more than 85 percent of undergraduates do at least one internship before graduating. For each hour of academic credit for an internship, guidelines recommend the student work 5 hours – a far higher ratio than for a traditional course plus homework (nationally averaging a total of about 2 hours per academic credit). And so, for example, if students do a 6 hour internship, they are expected to commit to 30 hours of work each week, compared with the roughly 12 hours they would have devoted to a traditional 6 credit course.

The numbers tell the tale: For today’s undergraduate in the US, at least 10 hours a day are filled, not including eating and sleeping – or internships. Not surprisingly, there is little time left for additional studying, including academic reading.

B. Shifting Demographics and Curricula
The number of hours studying is not the only change that has taken place over the years for university students in the US. In the 1961 Project Talent survey, students reported working only 4 hours per week. The 2003 NSSE survey put the number at over 9 hours weekly. (Recall
that the figure from the 2016 NSSE was 15 hours for paid work.) Internships were few and far between fifty years ago, though extremely common now. And while there are no good statistics on how many hours university students spend daily on texting and social networking, these activities undoubtedly cut into the amount of time otherwise available in the course of a day.

Another significant change has been in the demographics of students attending college in the US. In 1965, only about 6 million were enrolled (Statista n.d.) By 1976, that number had risen to nearly 11 million, and by 2014, to over 20 million (National Center for Education Statistics 2015). Not only are more students enrolled, but the composition of attendees has shifted. In 1976, barely 1 million black students were in college; by 2014, the number was nearly 2.8 million. Similarly, while 1976 enrollment of Hispanic students was only 384,000, that number had climbed by 2014 to almost 3.2 million (National Center for Education Statistics 2015). In recent years, organizations such as the Lumina Foundation and the Bill and Melinda Gates Foundation have supported major initiatives to help a diverse population of undergraduates begin and complete college.

At the same time, universities themselves have been rethinking their curricula. In the US, there has been a significant shift from lecturing to discussions and active learning projects. New modalities for accessing information – be they podcasts or TED Talks, videos or Google searches – have naturally reduced faculty members’ reliance on printed texts. Regarding written texts, not all are in hardcopy, leading to the question of whether students are as likely to complete a reading assignment if it is online as in print. (The data here, though largely anecdotal or from pilot studies, indicate print is the better motivator.)

Another relevant curricular change is driven in part by the widespread use of online learning management systems (LMSs) such as Blackboard or Moodle, on which course assignments can be uploaded. Increasingly, faculty post articles or book chapters. (Copyright restrictions nearly always preclude posting entire books.) The advantage of using an LMS is that course materials are available – for free – anywhere the student has an internet connection. A potential disadvantage, of course, is that students are exposed to selections and summaries, not entire works.

What about the level of complexity of readings students are asked to undertake? Anecdotal evidence suggests many faculty are increasingly favoring readings characterized by
more straightforward prose than complex argument or nuanced language, though objective data are needed before drawing conclusions. Where we do have objective information is on recent changes to the vocabulary portion of the Scholastic Assessment Test (SAT), run by the College Board, that many high school students take in preparation for entering college. In 2014, the test was revised to eliminate words deemed obscure and to focus instead on “what the College Board calls ‘high utility’ words that appear in many contexts, in many disciplines” (LEWIN 2014). The goal of this revision was to narrow the gap between test scores of rich and poor students, and eliminate advantages that might be gained through expensive test preparation courses.

C. What Do Students Need to Read?
The composition, academic background, and individual goals of the college-going student body in the US continue to evolve. The history of higher education in America reveals that the curriculum has repeatedly shifted as well. Mandatory Latin and Greek, and a fixed curriculum for all, yielded to electives, choice of major field of study, modern language offerings (along with courses in the sciences and mathematics), and multiple iterations of general education programs. It is therefore only to be expected that as the students entering college change in character, the curriculum and the educational principles behind it will alter as well.

We have already noted some of the obvious changes. Instead of lectures and assigned readings being the prevailing means of instruction, video and audio materials are increasingly appearing on course syllabi. Similarly, active learning (often student-led) is becoming a staple in many classrooms, as is use of the internet as an primary source of information.

When it comes to the shift towards reading digital material rather than print, the challenge is grounded in the medium through which digital texts are accessed. Computers, tablets, and smartphones are designed for rapid use and search, not for reflection and analysis. Digital media also facilitate multitasking, which is antithetical to focused reading. As a result, assigned reading that is accessed digitally structurally encourages hyper reading, rather than deep reading. Recall the definition of hyper reading:

\[
\text{a strategic response to an information-intensive environment, aiming to conserve attention by quickly identifying relevant information, so that only relatively few portions of a given text are actually read (HAYLES 2012, p. 166)}
\]
With regard to designing an appropriate curriculum for contemporary media-saturated students, Hayles questions the relative importance of assignments that call for deep attention (and, derivatively, deep reading) in universal education. She argues that “[a] case can be made that hyper attention is more adaptive than deep attention for many situations in contemporary developed societies” (Hayles 2012, p. 194).

Whether or not faculty agree with Hayles’ position, it appears that many faculty may be engaging in their own version of hyper reading.

D. Faculty Models: Reading versus Using

Besides their role as creators, providers, and interpreters of course material, faculty are typically also responsible for engaging in research. For most disciplines, such inquiry has a component that entails reading. Texts might appear as journal articles, stand-alone book chapters, or entire books.

How much text are faculty actually reading? Researchers from the University of Tennessee and the University of North Carolina have been studying the reading patterns of faculty members in science, technology, medicine, and the social sciences, going back over thirty years (Tenopir/King/Edwards/Wu 2009). The goal has been to see how much professors read the journal literature each year and how much time they spend reading each article. Between 1977 and 2005, the average number of articles scientists read annually increased from 150 to 280. However, the average amount of time (in minutes) spent on each article decreased from 48 minutes in 1977 to 31 minutes in 2005. Interestingly, participants in the study reported they were paying the same amount of attention to articles over the years, despite the decline in how much time they devoted to actually reading each piece. Were the faculty members now doing more power browsing than in years past? Had they become better readers? Had the scientific articles gotten shorter between 1977 and 2005? We don’t know.

There is also the question of what kinds of articles faculty are looking at in the first place. A sociologist at the University of Chicago surveyed the references cited in a database of 34 million scientific articles. He analyzed the citations with respect to whether the articles cited were available online. The more journals became digitally available, the more recent the references became, and the narrower their scope (Evans 2008).
When it comes to reading book chapters or books, digital technology may also have a role in shaping how much we read. While the data here are anecdotal, I draw on my own experience to suggest that our ability to access and search books electronically is leading faculty to “use” rather than “read” text. Consider this scenario: It is midnight, the library is closed, and I want to check a source for a paper I’m writing. If my library has an electronic copy of the book, I gratefully bring it up on my computer, confirm the specific item I am looking for, and then log out. If I had been using the physical book, I would have checked the source but then also probably perused the surrounding pages or maybe looked over the table of contents. I would have lingered.

What we do have some data on is research habits of students. The Citation Project (n.d), which studies issues relating to the teaching of writing, offers worrisome findings about the way today’s university students are making use of reference sources (books, journals, online materials, and so on) in their research papers. In the student papers the project reviewed,

- 46 percent of citations were to the first page of the source
- 23 percent were to the second page
- 77 percent were to the first three pages

Of the works that students cited, 63 percent were indeed longer than three pages, some much longer.

VI. Concluding Remarks

Digital technology is still quite new. The internet is only 25 years old. Google has been available for only 18 years. The Amazon Kindle appeared in 2007, and the surge in reading books onscreen is even younger. Therefore, any predictions we make about the impact of these new technologies on reading in the academy must be accompanied by responsible caveats. Nonetheless, there is enough evidence to suggest that a cluster of factors, including technological, are likely to reshape the role that reading plays in higher education.

A. Predictions

Here are some predictions about student reading assignments:
Assignments made by faculty (and undertaken by students) will make growing use of digital materials, largely for reasons of cost and convenience.

Reading assignments will continue to shift from books to articles or chapters.

Reading assignments will favor straightforward prose over complex and nuanced argumentation.

Reading assignments will continue to be reduced in favor of audio and video.

And here are predictions about faculty research patterns:

- Faculty will increasingly “use” books rather than read them.
- When conducting literature reviews, faculty will increasingly be tempted to focus on material that is easily available digitally, ignoring sources in harder-to-locate print.

B. The Role of Technology

Undoubtedly, the rise of digital technology is contributing to changes in the amount and type of reading taking place today in the academy. However, it would be a mistake to overlook other important contributing factors, including reduced enrollment in humanities courses, changing student demographics, redistribution of calls on students’ time, and the reality that cost rather than personal preference is driving a portion of the move from print to digital reading. We also need to remind ourselves that before the rise of digital technology (and continuing today), readers don't always finish reading print books. Rather, we often skim them, use the index to locate specific text without reading surrounding paragraphs, and are distracted while engaging in the act of reading.

C. Implications for Education

The primary challenge for higher education regarding the place of reading in the academy is our failure to think about the issue. We assume that faculty and students alike have historically read and will continue doing so, without asking if the nature of the reading we assign – and engage in ourselves – is shifting. We know that many texts are available onscreen, but there is little research into the question of whether deep reading – or even sustained linear reading of any sort – is as likely to occur when reading onscreen as when reading in print.
Digital technology has enormous potential to bring texts to audiences who have little or no access to print – or to particular print texts. Similarly, the diverse activities in which students today increasingly participate (be they internships, volunteer work, or paid employment) play important roles in their personal and professional development, and fiscal well-being. That said, it is incumbent upon those of us who are concerned about the role reading will have in higher education in the coming decades to actively engage with the issue.

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