



# Rendering technology visible: The technological literacy narrative

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## Abstract

This article describes the process of inviting students into discussions of new literacies and writing and technology through technological literacy narratives. The narratives offer benefits for students, classrooms, scholars, and teachers. The narratives encourage students to explore the often unexamined technologies that influence their writing processes, rendering technology visible in students' life stories. Furthermore, the narratives initiate dialogue about contexts of literacy within the classroom, invite discourse between teachers and students, provide useful data for researchers in the field, and offer important information for teachers of writing, rendering an additional perspective on our students' writing practices with new technologies in and beyond classroom walls.

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## 1. Introduction

As writing instructors, most of us require that the majority of assignments be *typed*, a somewhat archaic term from the era of the typewriter that nonetheless indicates a composition mediated by word-processing technologies, rather than handwritten with pen and paper. However, after dispensing with our homework assignments and requiring a typed draft, how many of us actually take the time to explore technology as a part of the writing process? We discuss brainstorming, prewriting, researching, outlining, revising, and copy editing, but what role do various technologies play in the writing process? As our students compose on computers, and, for that matter, on smartphones and iPads and Blackberries, what, if any, challenges do they face? How do these new writing activities, such as texting, tweeting, and posting on social networking sites, fit into a student's writing life? According to [Amanda Lenhart \(2010\)](#) of the Pew Research Foundation, 77% of 17-year-olds are texting friends daily, with boys averaging 30 messages and girls averaging 80 messages per day. Text messaging is only one way writing is changing; a study from [The Nielsen Company \(January 2010\)](#) stated that "global consumers spent more than five and a half hours on social networking sites like Facebook and Twitter in December 2009" per day, presumably reading others' information as well as writing their own content. Writing practices are changing rapidly; as writing teachers, we must work with students to understand how these new habits are changing composition. How can we value and expand on these new literacy practices? What does this mean for classrooms of the future? Assignments such as technological literacy narratives help illuminate technology in the writing process and assist composition instructors in understanding and incorporating new technologies into the writing classroom.

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As writing teachers, it is clear that it is necessary not only to be literate to be successful but also to be literate with various technologies. However, this literacy should not be assumed by composition instructors. In her article about “accumulating literacy,” Deborah Brandt (1998) pointed out, “literate ability at the end of the twentieth century may be best measured as a person’s capacity to amalgamate new reading and writing practices in response to rapid social change” (p. 651). In the 21<sup>st</sup> century, writing technologies certainly evolve swiftly, requiring students (and teachers) to adapt quickly. Moreover, based on her research, Brandt suggested that scholars can “begin to see how the role of the school in an advanced literate age can be reconceptualized to help students at all levels detect the residual, emergent, often conflicted contexts of literacy that form their world” (p. 666). As writing teachers in the academy, we have the opportunity to help our students “reconceptualize” their writing practices, and, as a part of our pedagogy, we can bring discussions surrounding the acquisition of numerous literacies into our classrooms as part of our conception of the writing process.

But how do we, as instructors of composition, come to understand our students’ varying relationships with the technologies of writing when every term, every class, and, for those of us teaching at multiple locations, every college and university, is different? How do we adapt our pedagogy and our understanding of best practices of teaching writing in this rapidly shifting culture of technology? Working with students on projects such as technological literacy narratives can help us answer such questions, looking to the future together. This article describes the process of inviting students into discussions of new literacies and writing and technology through technological literacy narratives. The narratives offer benefits for students, classrooms, scholars, and teachers. The narratives encourage students to explore the often unexamined technologies that influence their writing processes, rendering technology visible in students’ life stories and illuminating the link between the tools of composition and our writing practices, ultimately guiding the students toward revelations about their identities as writers and helping them better understand their best writing practices. Furthermore, the narratives can initiate dialogue about contexts of literacy within the classroom, yielding thought-provoking information for class discussions that allows students to recognize and appreciate differences in technological literacy. Moreover, the narratives invite discourse between teachers and students, encouraging instructors to expose themselves to new literacies, learning from and with the students. This type of narrative also provides useful data for researchers in the field, incorporating student voices into discussions of writing and technology, and offers important information for teachers of writing, rendering an additional perspective on our students’ writing practices with new technologies in and beyond classroom walls.

## 2. Origins, structures, and practical matters

Many years ago as a graduate student and teaching associate, I found myself teaching in a computer lab for the first time, and I struggled, at first, to incorporate the computers into my pedagogy. I thus set out to better comprehend these new technologies and how I could best use them in my teaching practice, and I was rather surprised to find most scholars in the field talking *about* students rather than *to* the students themselves. Given that an important perspective, that of the students, was largely absent from the academic discussions of writing and technology, I chose to create a multi-part study to ascertain how students felt about computers and composition and to determine what impact various technologies might have on students’ composition processes.<sup>1</sup> As part of that project, I developed an assignment I named “computer literacy narratives” at the time, which, in light of even newer writing technologies, I am currently calling “technological literacy narratives,” while acknowledging that terms like “technology,” “literacy,” and “narrative” are all contested.<sup>2</sup>

The technological literacy narratives were inspired by Irving Seidman’s phenomenological interview technique (1998) as outlined in detail in his groundbreaking book *Interviewing as Qualitative Research: A Guide for Researchers in Education and the Social Sciences*, and Gail Hawisher and Cynthia Selfe’s landmark study of literacy and technology that was documented in several publications, including the article “Becoming Literate in the Information

<sup>1</sup> The results of this study were published in several articles, including Susan Kirtley’s “Students’ Views on Technology and Writing: The Power of Personal History” (2005), Susan Kirtley “Listening to My Students: The Digital Divide” (2005), and Susan Kirtley’s “A Girl’s Best Friend: Gender, Computers, and Composition” (2008).

<sup>2</sup> For more on the controversy surrounding these terms, see Ann Wysocki and Johndon Johnson-Eilola’s “Blinded by the Letter: Why Are We Using Literacy as a Metaphor for Everything Else?” (1999), Gunther Kress’ *Literacy in the New Media Age* (2003), as well as Sheila Scribner and Michael Cole’s *The Psychology of Literacy* (1981).

Age: Cultural Ecologies and the Literacies of Technology” (2004) and the book Cynthia Selfe and Gail Hawisher’s *Literate Lives in the Information Age: Narratives of Literacy From the United States* (2004). Hawisher and Selfe’s project aimed to “identify how and why people in the United States acquired and developed (or, for various reasons, failed to acquire and develop) electronic literacy between the years of 1978 and 2003” (*Literate Lives*, p. 6). To explore technological literacy, Hawisher and Selfe gathered “literacy autobiographies” through the World Wide Web, audio taped interviews, and written questionnaires completed on disk by participants. Particularly in the earliest incarnations of the computer-focused literacy narratives, I utilized several ideas from the questionnaires developed by Hawisher and Selfe, and I am very grateful for their generosity in sharing their ideas and research. However, while Hawisher and Selfe gathered data in one extended session, and did so through various methods (audio taped interviews, written documents, etc.), I chose to couple the idea of literacy narratives with Irving Seidman’s structure for “in-depth, phenomenological interviewing” (p. v), and asked the participants to complete the narratives in a self-directed, written format as part of a class assignment that specifically concentrated on studying technology and composition. In Seidman’s technique:

The first interview established the context of the participants’ experience. The second allows participants to reconstruct the details of their experience within the context in which it occurs. And the third encourages the participants to reflect on the meaning their experience holds for them. (p. 11)

I have used these technological literacy narratives in several courses focusing on “Writing and Technology,” “Digital Literacies,” and “Computers and Composition.” Sometimes I include the narratives as part of a research project, but I have found great pedagogical value for the assignment even when I am not engaged in a research endeavor related to the narratives.<sup>3</sup> The actual technology literacy narrative assignment has been adapted since I originally used it in 2001. In the beginning, I focused the writing prompts primarily on computers, asking students to survey and analyze how computers might influence one’s writing process, but over time, I have adapted the form to accommodate and incorporate new technologies (see [Appendix A](#) for the latest version of the assignment). As students are often on the cutting-edge of new technologies (while I tend to be a late-if-ever adopter, particularly of social networking platforms), I ask for students’ assistance in continually redesigning the wording of the assignment, a practice I plan to continue when I teach the narrative this year.

However, before the students start the technological literacy narratives, I open with an in-class exercise that demonstrates how the students conceptualize their writing processes, revealing what they see as important parts of the composing process and what remains hidden or unexamined. To begin, I request that students take a few minutes and, with pen and paper or whatever tools they might have available, imagine that they have an essay due for one of their classes. I then ask them to describe the process they will go through to compose that essay. After they have had a few minutes to work, we share our processes (including my own) and discuss similarities and differences. Almost all students make a list that reads something like “1. Procrastinate, 2. Outline, 3. Write, 4. Revise.” Very rarely do students indicate whether they write on a computer or with a pen and paper, but as I call attention to this ambiguity, students inevitably begin piping in with additional clarifications, such as having to do the outline by hand or only writing in a certain kind of notebook or with a special pen. Others simply must write on a Mac, while others prefer a PC. Somehow the tools or technologies of the composition process remain, for the most part, invisible in my students’ preliminary thoughts on writing, and although the students have strong preferences and inclinations for working with various technologies when writing, they rarely recognize these habits until prodded. This exercise and discussion demonstrates this absence in their understanding and encourages the students to think deeply about how those unnoticed technologies shape their writing lives, positioning the class to further explore how these previously unnoticed tools shape their writing experiences.

After this introduction to the writing process, the students are well prepared to continue investigating the roles that various technologies have played in their writing lives through the technological literacy narrative. The assignment is structured into three discrete parts, which allows the students to fully immerse themselves in rendering their past relationships with technologies before considering how that past affects their present writing practices. The initial

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<sup>3</sup> The students in my classes are always informed early on of the requirements of the course and have ample opportunity to withdraw if they are uncomfortable with the assignments. If I plan on incorporating the narratives into my own research, I ask the students to sign an Initial Consent Form at the beginning of the term and a Confirming Consent form at the end of the term.

section focuses on the writer's history with technology, asking about the student's first experiences with computers and other technologies, something most of them have never previously contemplated. The first section also announces the intention of the next two parts of the project, to explore the writer's present relationship with technology (in particular writing technologies), before analyzing the past and looking to the future in the final portion of the project. The opening section is assigned the first week of class, and students begin the assignment by fastwriting in class in response to a series of prompts taken from the assignment sheet. After the in-class writing, students share their impressions and recollections in a full-class discussion, a process that often inspires others and jogs memories as students comment on long-forgotten Speak-and-Spell toys and computer games such as *The Oregon Trail*. Following the discussion, the printed assignment sheet is disseminated and discussed. (While handouts are available on a class website, paper handouts are also distributed.) Several weeks later, the process is repeated—after fastwriting about students' present relationships with technology, they share what they wrote in a class discussion before the specifics of this section of the assignment are explained. Finally, about four weeks before the end of the term, the class fastwrites in response to a series of questions asking each of the participants to reflect on his or her history in light of our discussions and readings, analyzing the narratives and speculating on the future. During the final two weeks of the term, students post the completed narratives to our class (protected) website in order to share and examine the stories in correlation with one another, and I include my narrative with the others. I then ask students to read all of the narratives and look for connections and themes as well as points of departure as they examine the wide range of experiences presented in the narratives; this process inevitably inspires a lively and engaging dialogue about similarities and disparities across the class.

### 2.1. Outcomes: Student learning

Not only do these powerful narratives provide engaging material for classroom discussion, but also through the process of composing the narratives the students claim ownership of their experiences, making connections and coming to new understandings of their histories. While Seidman designed the phenomenological interviewing approach for conducting face-to-face interviews, I have found that this technique works very well for literacy narratives assigned within the classroom. Given the reading and discussion schedule of a course, over the term students gain facility and awareness as they interpret their own histories; and this three-part structure allows the students to shape and re-shape the narratives with the benefit of additional time for reading, reflection, and discussion. As [Mary Soliday pointed out in "Translating Self and Difference through Literacy Narratives" \(1994\)](#):

literacy stories can give writers from diverse cultures a way to view their experience with language as unusual or strange. By foregrounding their acquisition and use of language as a strange and not a natural process, authors of literacy narratives have the opportunity to explore the profound cultural force language exerts in their everyday lives. (p. 511)

This process of writing one's personal history with writing and technology over time allows extended opportunities for the students to make their experiences "strange," achieving a critical distance that allows them to analyze their experiences with additional objectivity and understanding. Furthermore, drawing on Seidman's extended interview protocol as well as Hawisher and Selfe's focus on literacy autobiographies in a classroom environment creates an assignment that I believe benefits the students as they engage with course learning objectives that address issues related to writing technologies. The students are invited to explore evolving technologies on the macro level, studying history and theory, and on the micro level, examining how world events influence the individual's life experiences. When we involve students in reflecting on their experiences, we can help them gain self-awareness as well as a more critical stance toward the factors that shape their attitudes about technology.

As they develop this mindfulness of self and technology, the students have the opportunity to gain authority as scholars and writers. [Blake J. Scott \(1997\)](#) believed "literacy narratives can validate students as authors and writers" (p. 109), an idea that I find particularly appropriate when working with the more technologically focused literacy narratives. As [Susan DeRosa \(2008\)](#) argued, "Literacy narratives may provide us with an opportunity to explore changing versions of literacy and writers' visions of themselves as writers," (p. 2) and, for my purposes, the students also become more critical and conscious of the tools of the writing process, becoming what DeRosa called "active participants in the

construction of their literacy development” (p. 2). For example, one student I worked with, Belinda,<sup>4</sup> studied her own story and decided that her later exposure to technology was actually beneficial to her development as a writer: “I don’t regret getting a computer so late because it would have affected my writing at an earlier point if I encountered it earlier in life. I think that computers make a big difference on how one writes so the later you engage in computers might be a good thing for your writing.” The narratives break down the writing process, revealing how one’s past shapes the writer’s development. The narratives also encourage analysis such as Belinda’s, who, through the drafting process, came to understand her delayed exposure to technology—what might be perceived as a lack or shortcoming—as an advantage in her history as a writer.

Over the course of the three-part drafting process coupled with class readings and discussion, students frequently analyze their stories in light of larger issues and new information, achieving expanded comprehension of their own histories of writing with technologies. One student I worked with, Charlotte, initially wrote a rather skeletal account of her life experience with technology, but the final version of her narrative was informed by an increasing awareness of the role her father played in shaping her feelings for new technologies. Charlotte’s final analysis was also influenced by additional awareness of the ways in which gender stereotypes related to technology played into her own experience. As she drafted and analyzed, Charlotte recalled that her father did not believe that playing video games was an appropriate pastime for a young woman, and influenced by his disdain, Charlotte avoided technology for years. This recollection and subsequent reflection was entirely absent from her first draft, and it was not until later, with time and thought, that Charlotte came to contemplate how her father’s concern about “ladylike” behavior kept her away from technology, and how gender stereotypes as well as family expectations played into her own sometimes troubled relationship with technology. This realization offered Charlotte a deeper understanding of her earlier aversion to technology and her reluctance to use computers for writing, illustrating that her avoidance stemmed not from any inherent weakness or failing on her part but rather from the pressures and prejudices of others. This insight allowed Charlotte to approach new technologies with increased confidence and curiosity.

Students also frequently come to a new understanding of how class and access influenced their histories with technology. Naj noted, “if one were to read my story they would probably be in ‘aww’ about how I got a computer,” the “aww,” as Naj put it, reflecting both a sense of wonder (“awe”) as well as sympathy (“aww”) because Naj “couldn’t afford a computer growing up” and had to work very hard to catch up with peers who always had access to the newest technologies. Naj had never before contemplated her struggles in acquiring the technological tools she required as a student, and this examination seemed to buoy her confidence. Naj had succeeded in the past despite adversity and came to believe that despite any obstacles she would continue to be a productive student, finding a way to compose as necessary for school.

Walt, a student with a great deal of experience with technology, came to explore more personal revelations in his narrative, attempting to take an outsider’s perspective on intimate details from his story and beginning to question his reliance on technology as an outlet for his emotions:

People looking at my experience could pull so many things out of it. They could pull out the online sex and use it to show depravity, or they could pull out the damage to my eyesight and claim that we need to study technology before it endangers the public. They could say that computers hurt my health because of my sleep patterns in high school, or they could pull out the lifelines my friends online have thrown me and emphasize how likely it is that I would have died without this online experience.

In his writing, Walt examined the ways in which technology saved him as a young man, allowing him to connect with others online who felt similarly different and isolated. Yet in the end, he was conflicted: “I used to think the computer could sustain me somehow—friendship, creativity, my outlet for expression and communication. . . it was all there. Now I am not so sure.” Interestingly, Walt takes various points of view as he studies his own story, noting his many interactions with technologies and the ramifications, but ultimately, Walt finds himself somewhat unsatisfied fulfilling his needs through technology and questions his dependency on computers. Although Walt suggests concern

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<sup>4</sup> All students cited in this article signed an Initial Consent and Confirming Consent Form to participate and be cited in my research. The students were also invited to respond to my work, and each student chose his or her own pseudonym. Paul Anderson and Heidi McKee’s (2010) article on “Ethics, Student Writers, and the Use of Student Texts to Teach” provides helpful guidelines for using student texts in classes, which can be adapted and applied to publishing students’ works as well.



about his reliance on technology, I would argue that the scrutiny afforded by the narrative had a positive effect on Walt, who came to consider the importance of real-world relationships as well as virtual friendships in his life.

In the process of composing the narratives over the term, students are often stunned by the previously unexamined roles various technologies have played in their lives. For one, Belinda simply stated, “I never realized what a significant role computers have played in my life.” Belinda had never had the opportunity to investigate her relationship with technology before, and the narratives allowed her to come to a deeper understanding of technology and of herself. The tools of technology were no longer invisible to Belinda, who approached new technologies with excitement and additional consciousness. As the students draft the narratives, the contours of technology are revealed in each individual’s writing process and are no longer overlooked and ignored. The narratives invite students to analyze and explore their own stories, reaching deeper insights and gaining new appreciation for their experiences with technology. As technology comes into focus, the students acquire additional knowledge that they may draw on as they consider how they will engage with new technologies in the future.

Over the years, I have noticed that many students craft “success stories” in which an early fear of computers or lack of new technologies gives way to mastery through the hard work of the authors. Emily came to a new understanding of her animosity for technology after her father was forced out of his job as a printer by new printing technologies. While she felt some “regret for letting my ignorance hold me back for so long,” she concludes, “It makes me feel good that I have taught myself what I have on the computer. . . it was conquering a huge fear for me—technology. . . Many people will just accept the fact that they are not computer literate. I did not allow that to happen, and learned what I need to know to get by.” In owning her experiences, Emily gained pride in her past and confidence in her future. Ultimately, Ana reflected on overcoming her fears of technology, hoping “that by reading my narrative people will be able to see how I went from not being interested in computers to wanting to know more.” Emily, Ana, and many others I have worked with cast their narratives as tales of triumph in which they succeed in learning about and utilizing new technologies despite setbacks, often prompted by a lack of access and/or interest. Shaping the stories in this way ascribes authority to the authors and offers them a sense of pride in their accomplishments.

The fact that many students mold their narratives as stories of victory in spite of challenges is logical. In “The Narrative Roots of the Case Study,” Thomas Newkirk (1992) argued that researchers draw on deeply internalized “core mythic narratives” in writing case studies, and that readers believe them “because of the gratification we get from seeing cultural myths being reenacted” (p. 136). And, while the students I have worked with are not writing case studies of others but rather self-studies, they, too, share a common “core” of narratives and must feel pleasure in seeing their stories cast as cases of accomplishment in spite of adversity. There is power and persuasion in stories and storytelling, and one of the great strengths of the technological literacy narrative is that the responsibility for shaping, crafting, and analyzing the narrative rests with the student, not the researcher. The students who craft and consider their histories as success stories empower themselves by valuing past struggles and accomplishment in spite of obstacles and often look to the future with increased confidence.

In her article “‘And Now I Can See’: The Function of Conversion Narratives in the Discourse of Cultural Studies,” Jane Greer (1995) urged caution when examining what she terms “conversion narratives,” as they may “signal a denial of self and an internalization of authority” (p. 3). However, I concur with Susan DeRosa (2008), who asserted:

It seems hasty on the parts of critics who imply students’ reflections on their literacy experiences lead them to become mired in a particular historical narrative or force them to adopt a potentially repressive discourse. Such implications seem to dismiss the potential of literacy narrative pedagogies and discount the importance of student-produced reflective narratives as writing that offers new perspectives about literacy (p. 5).

In my experience as a teacher and scholar, I have found that while many students craft success stories to characterize their experiences working with technology, it is by no means a monolithic perspective. Even those who do favor a more optimistic outlook generally temper positive assessments with caveats and real-life skepticism and concern. Naj, as an example, was proud of all she had accomplished in learning to write with various technologies but still raised serious concerns: “There is such a continuous improvement in computer technology I wish there could be such improvements in other important things in life (i.e. Cancer, AIDS, racism, etc.)” Again, it is significant to note that the students take the lead in shaping the narrative; if a student chooses to cast his or her life story as a narrative of triumph over adversity, it is his or her choice, and I argue that crafting a narrative in this way gives the student agency in future endeavors to engage with new literacy practices. It is important to recognize that these narratives are fashioned by individuals

working within a culture and specific context, yet these stories allow the students to better understand that culture and context, coming to know themselves in new ways.

## 2.2. *Outcomes: Classroom benefits*

As a teacher, I have found great value in including student texts in all of my courses for, as Joseph Harris, John Miles, and Charles Paine (2010) related in the “Introduction” to the volume *Teaching with Student Texts: Essays Toward an Informed Practice*, “working closely with student texts is not simply a classroom move but a defining practice for the field of writing and rhetoric” (p. 4), and this certainly holds true when exploring writing and technology. While incorporating student texts supports a student centered pedagogy, it also reinforces my understanding of the discipline of rhetoric and composition as continually returning to the source—the students themselves. Drawing from these student texts helps dispel any inadvertent inattention to technology, representing the tools of composition as perceptible and therefore meriting scholarly consideration. Therefore, from a theoretical perspective as well as a very practical, hands-on point-of-view, incorporating student texts into the class reading materials for a writing class simply makes sense, and, clearly, the technological literacy narratives never fail to provide fruitful information for classroom discussion. As the students read scholars and experts such as Sven Birkerts, Dale Spender, Cynthia Selfe, Gail Hawisher, David Bolter, and Donna Haraway, they can see the larger trends in scholarship on writing and technology reflected in their own narratives, as well as those of classmates. Students’ experiences are respected as relevant and engaging texts placed in dialogue with more established authorities, and the class discussions are infinitely richer as a result of including these student pieces. Early on in this project I anticipated that the students’ experiences with technology would be similar and wondered whether the narratives would become repetitive, yet I have been surprised to find that even in classes that might appear homogenous on the surface, important differences and ideas always emerge, resulting in an enlightening and valuable discussion for the class. As Scott Rogers, Ryan Traumann, and Julia Kiernan (2010) pointed out in the article “Inquiry, Collaboration, and Reflection in the Student (Text) Centered Multimodal Writing Course,” “To teach with student texts is to acknowledge that students are savvy and experienced enough to collaboratively shape and enact productive classrooms” (p. 200). This approach thus affirms the students’ words and lives as worthy of study and allows the students to influence the structure of the course. For example, when Belinda shared with the class her conclusion that delayed exposure to technology (and in particular computers) made her a better writer, the students engaged in a passionate discussion of whether writing technologies are improving or damaging writing and writers. Some students, like Christine, argued emphatically that new technologies provide too many “shortcuts” and that ultimately “writing is getting worse.” Others felt that early exposure to technologies gave them a distinct advantage as writers.

As the students articulate their accounts, issues and ideas important to individuals emerge, and these new insights and observations about writing and technology often come to shape the structure of the course through discussions of the narratives, readings suggested by the students, and the directions of the final projects. For instance, one group of students, inspired by their own experiences as detailed in the technological literacy narratives, developed a group project acting as ethnographers studying how elementary school children use technology in Language Arts classes. In the opening to the project, the students reflected:

We had no idea that technology spanned so many areas of society. It affects the ways we work, how we get to work, the ways we learn, and even the ways that children are raised. That’s right, technology has been increasing for so long now that it has made its way into the woodwork.

The narratives helped reveal technology to the students and allowed them to consider their stories in conversation with others in the class as well as published authors, ultimately concluding that technology has insinuated itself into the very “woodwork,” implying a foundational role as well as an unseen yet expansive presence. Furthermore, technology’s influence was an idea that they had never considered prior to this process, and based on these new insights, the students were inspired to learn more, following trends emerging for the next generation of students. Contemplating the narratives as a group encourages additional revelations based on encountering the stories of others, perspectives the students had not previously contemplated. After one class session spent discussing the narratives, Naj noted that the dialogue was “interesting this week because it got into many topics we don’t talk about on a daily basis.” The impact and influence of technology, once demonstrated through these narratives, became a fascinating topic for classroom conversation, despite being a subject that had previously not engaged the group’s attention “on a daily basis.”

That is not to say that all class discussions and group work surrounding the technological literacy narratives are tension-free, for as students become more conscious of the tools of writing as well as culture, examining issues surrounding technology, class, race, and gender can become extremely heated. Yet these technological literacy narratives help ground the discussion in real life. In her narrative, Naj discussed how her identity as a woman of color influenced her acquisition of technological literacy and suggested that “me being a woman of color put two strikes against me in the employment patterns,” and as a class we then read several articles about intersections of gender and race with technology. When one student complained that the discussion was not interesting in an online discussion board (which was part of our class website that also contained our technological literacy narratives), Naj countered, “I was just wondering why the race issues didn’t interest you? Is it because you’re not a minority and don’t have to worry about these issues?” The narratives brought technology into focus—Naj’s family did not have access to many technologies while she was growing up—and further rendered an individual’s experience of that technology, as a woman and member of a minority group, in vivid detail and, in fact, in material form. While the technological literacy narratives have the power to make personal experiences removed from the self and thus accessible for interpretation, they also have the power to make others’ experiences shared and concrete. When addressing these contested subjects in class, it is particularly important to honor and respect the students’ experiences, and I follow with the thinking of Bruce Horner (2010) in the essay “Re-Valuing Student Writing,” who noted the value of “aiming to treat student texts as sites for students’ and teachers’ collaborative engagement in legitimate academic inquiry: as real writing, not ‘nonwriting’” (p. 22). After reading the technological literacy narratives from her classmates, Maria remarked, “I know from my own experience that I make assumptions when it comes to people who don’t know how to use computers. . . I just figured sometimes that if I know how to use it everyone who is my age should also, and this is wrong.” Maria learned from and valued the histories of her peers, “real writing” with real consequences. The students’ work shapes our discussion, challenges assumptions, and grounds the theoretical in the personal. These technological literacy narratives matter within and beyond our classroom walls.

### 2.3. Outcomes: Incentives for teachers and researchers

As a compositionist, I look to students to help inform classroom practice, particularly when working with technology, and as students gain comprehension of the importance of technology in their lives and writing processes through the technological literacy narratives, they are also instructing me in regards to current writing practices. However, when one turns to the scholarly literature, much of the research addressing students’ experiences with technology is, as previously mentioned, done *about* students, with researchers observing or commenting on student behaviors from a distance, rather than working *with* students by bringing their ideas into the scholarly discussion. In addition to helping students gain personal insights and enhancing classroom discussions of writing and technology, technological literacy narratives can bring student voices into academic conversations of how to understand and make use of technology in relation to composition studies and can encourage teachers of composition to examine their own pedagogies in light of changing technologies.

I am not the only scholar to assert the importance of including students in discussions surrounding writing with technology, and technological literacy narratives are certainly not the only approach to collaborating with students on research projects. Other scholars, such as Michael Gos (1996); Nancy Kaplan & Eva Farrell (1994); Donna LeCourt & Luanne Barnes (1999); Sarah Sloane (1999); Pamela Takayoshi, Meghan Huot, & Emily Huot (1999); Barbara Duffelmeyer (2000); Kristine Blair and Cheryl Hoy (2006); and Hawisher and Selfe (2007), have taken different approaches, yet share the goal of working to include student perspectives on technology and the writing process. These types of collaborative research projects that include student perspectives have much to add to academic thinking on writing and technology. As Paul Walker (2004) commented of the student perspectives presented in *Literate Lives in the Information Age*, “The case studies force us to rethink any assumptions we have about students’ literate lives. . . Selfe and Hawisher have begun a valuable exploration of the acquisition of technological literacy. . . Hopefully, their work inspires other scholars to continue careful study of how technology impacts our lives” (p. 244). One student I worked with, Charlotte, echoed Walker’s thinking, encouraging researchers to study students’ current writing practices and puzzled over the state of current research in writing and technology. She was confused as to why researchers were not, in her opinion, more interested in students’ current experiences writing with technology: “This puzzles me to why they would find little interest in the here and now and instead place their attention in the future. I feel that by looking at the obvious around us today we can see the future.” Technological literacy studies suggest one way of exposing



the “here and now” that our students are experiencing and heeding Walker’s call for additional studies that challenge suppositions and illuminate the reality of students’ engagement with various literacy practices.

As a researcher and a teacher, I can state unequivocally that my assumptions and prejudices about students’ ideas regarding technology have been thoroughly revised as a result of actively seeking out the student perspective, and unless we consult with students, how will we gauge our pedagogy and our theories of teaching with technology? If we don’t ask, how will we know? Technological literacy narratives invite students into scholarly discussions, encouraging shared and more comprehensive research. In my experience I have found the technological literacy narratives to be extremely valuable as a scholar and instructor. Had I not worked with students, I would not have realized how different their experiences are. At one time I naively imagined that most all young people were technologically savvy, but I discovered this was not always the case. As a scholar I certainly should have questioned the popular cliché that children and young adults were somehow inherently capable with technology and could program a DVR, build a website, or text at lightning speed with the instinctual ease of a younger generation. Yet when I started working on these narratives and talking directly with the students, my incorrect assumptions were quickly challenged. Students come from a huge variety of backgrounds and experiences with technology; they are from different countries, classes, and time periods. While as an instructor of composition I endeavor to work with a student’s strengths and weaknesses on an individual basis, my previous suppositions of technological skill and savvy limited my pedagogy. Students come to our classes from other countries, some with far less access to technology, and older, returning students may also have had various experiences (and sometimes lack of experiences) with technology. Undoubtedly, not every student can afford the latest, greatest gadgets. When I began reading these technological literacy narratives and really communicating with students, I realized I should take nothing for granted in regards to technological literacy, and this insight has changed my approach to teaching writing, for I urge students that might feel uncomfortable with any aspect of the writing process, including using computers or various software packages, to seek me out for assistance.<sup>5</sup>

On the opposite end of the spectrum, the technological literacy narratives also exposed me to the sheer magnitude of writing many students are doing outside of the academy, on Facebook and on blogs and through Twitter and texting. I have discovered that I, most likely along with many other teachers and scholars of writing, have a great deal to learn. The narratives can expose teachers to new literacies and new writing technologies, encouraging instructors to continually interrogate our own best teaching practices in light of the rapidly evolving landscape of writing technologies. Students bring in even more skills with various writing platforms, such as texting and social networking sites, and I will look to them to help guide me into the future of writing and technology. Over the years, students shared with me that they were doing much more than composing essays on computers, an idea reinforced by Andrea Lunsford’s (2009) study at Stanford, as documented by Cynthia Haven (2009), in which Lunsford notes that students today are doing more writing outside of school and focusing on “instantaneous communication.” In my experience, the students’ writing lives were much more varied than I had realized, as they were texting and tweeting on iPhones and Blackberries and updating Facebook pages from iPads, just to name a few of the new technologies and platforms students indicated utilizing to compose. By using this assignment, my own awareness as a teacher of writing with new technologies is continually expanded, and I therefore incorporate student suggestions into the ever-evolving narrative assignment. I have found that as the students come to examine their writing habits, they are keen to share them, and students are not shy about making suggestions for revising the narrative assignment and can help focus guiding questions on the newest writing outlets. It is indeed a brave new world, and while notions of literacy are slow to change within the ivory tower of the academy, assignments such as the technological literacy narrative can help render a perspective on the types of literacy students value. The academy largely clings to a narrow range of acceptable writing forms and platforms: the carefully typed research essay, a handwritten quiz, or perhaps a precisely formatted short story or poem, but our students are frequently twittering, tumbling, and texting—composition practices that frequently go unnoticed and unexamined by writing instructors.

These technological literacy narratives, though still somewhat old-fashioned in nature, allow the students to investigate what these new writing habits mean to them, and ask instructors to examine composition practices beyond the bandwidth of the ivory tower. By breaking down students’ writing histories into parts and allowing them time to consider their writing lives in dialogue with other students and published authors, students begin to see the technologies they had

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<sup>5</sup> For more on my findings in regards to students’ experiences with technology, see Susan Kirtley’s “Students Views on Technology and Writing: The Power of Personal History” (2005), and Susan Kirtley’s “A Girl’s Best Friend: Gender, Computers, and Composition” (2008).

not initially considered when I first asked them to show their writing process during the in-class exercise. They are able to vent the frustration they feel when teachers will not allow them to take notes on their iPads and smartphones. One student wrote about taking pictures on his phone to inspire his poetry and other writings, while another student wrote about being terrified to write an essay for school, while regularly (and eloquently) composing for his blog. Without the technological literacy narratives, these writing practices would have remained removed from and unexamined in the writing classroom.

With this awareness of how one might utilize new technologies as part of the writing process, I am a better teacher, helping my student translate his enthusiasm for blogging into an essay when I encouraged him to write a first draft on his blog before revising his work into an academic essay. Furthermore, I try to expand on these technological literacies within our class, for, following the technological literacy narratives, I invite students to engage in research and writing utilizing these new tools and genres, teaching the class and the instructor from their own experiences and interests. Students take on a position of authority, showing the instructor and classmates how one might take notes for an essay on a smartphone or receive feedback from an online fanfiction group. For her part, Charlotte cautioned that if the academy did not include new writing forms in our pedagogy, English teachers in particular were in danger of obsolescence:

...we should be teaching the traditional essay format and at the same time be teaching hypertext writing in English classes. . . So in my opinion we cannot sit back and whine or cry about how much writing is going to or has changed, but instead keep up with the times. Because the times will leave you behind. It is up to teachers to help all their students keep up with the times.

Charlotte argues that instructors of English have a responsibility to assist students in working with new forms of writing, rather than complaining about the decline of language and literature. Incorporating technological literacy narratives not only offers opportunities for researchers, but also engages instructors in the ever-evolving writing processes of the students that often remain outside the classroom.

### 3. Conclusion: Implications and directions for future research

When I introduce the technological literacy narratives to a class, I begin with the aforementioned in-class exercise in which students detail their writing processes, and when we come to the conclusion of the course, we often return to a discussion of that early experiment. I ask students to describe their writing processes again, and the answers they offer are markedly different from that first endeavor, with students discussing drafting with a favorite pencil in a special notebook, or blogging or twittering as brainstorming activities, or using a laptop or iPhone to create an outline. Technological literacy narratives can exert a powerful force. Unexamined technologies become evident and isolated, allowing the authors to study the forces at work in their literacy histories, owning their experiences and preparing for the future. The narratives further the collective understanding of the class, educating students and teachers alike, and invite instructors and researchers to rethink our field's understanding of writing and technology and our pedagogies with help from student authors, offering an underrepresented perspective in ways that top-down research cannot.

In fact, one great strength of the narratives is the heuristic nature of the assignment. The students take the lead in documenting *and* analyzing their stories, thus the information and the understanding is guided by the students themselves, rather than an outsider looking in. When given the opportunity to do so, my experience has shown that students are eager to discuss new and evolving technologies and how they help or hinder the writing process, discussing innovations I would never have considered, such as a student using photographs from his iPhone to inspire his poetry. Within the restricted format of a traditional writing class, it is unlikely that texting would be considered as a brainstorming technique or tweeting would be discussed as a way of receiving feedback on possible essay topics.

While I am delighted by the many positive outcomes I have observed by including technological literacy narratives in my teaching and research, I do have a few concerns. While the students I have worked with thus far have all been very forthright about their histories regardless of prior circumstances, I sometimes feel apprehensive that some individuals might be uncomfortable sharing past difficulties resulting from race, class, or gender and that they might feel compelled to censor their words and lives in a public forum. Furthermore, the technological literacy narrative was developed from my perspective as an academic trained in more traditional venues; therefore, the assignment takes a more conventional form as an extended, three-part narrative. While I believe this format does offer many distinct advantages, it does not allow students to use these new technologies as part of the assignment. In effect, these narratives are in many ways rather old-fashioned. We fastwrite in class as a group to initiate our thinking, and we discuss what we have written in class together. I still ask students to type and print the narratives, although we also publish them online. Yet in our

fast-paced environment where technologies rise and fall and come and go so quickly (see the decline of MySpace), I have come to believe that these narratives present a slower, more permanent way to document students' narratives of technology. This longer, more extended process of writing the narratives in several stages over an entire semester allows students to shape their own stories and increases awareness of technology. In such a rapidly evolving culture, this particular method encourages students to slow down and reflect critically on their histories, gaining authority as they shape the narratives, coming to understand how individual experiences reflect larger trends and issues, and achieving insight into how different writing tools might influence the writing process.

Working with the technological literacy narratives has made it very clear to me that students have a great deal to offer in discussions of writing and technology and should be invited to take part in the dialogue. As scholars, we can and should invite them to collaborate in our research. These types of collaborative research might take many forms, from large surveys to research partnerships with individual undergraduates and graduate students. What is important is working together to identify problems and challenges and actively encouraging students themselves to participate in framing the questions and answers. Furthermore, as teachers, we can encourage our students to consider the entirety of their writing process in full, thus educating themselves, their classmates, and their instructors concerning writing and technology.

I hope that this article inspires others to take the framework for technological literacy narratives and develop and refine it, perhaps incorporating more digital elements (Could the narrative be a website? Or a Facebook page?), possibly bringing in even more questions addressing various new technologies. As teachers and researchers, compositionists have a responsibility to explore the relationship between writing and technology in our classes and to open up discussions of process to include technology. The tools of writing should not remain invisible, their implications left unexamined. Technological literacy narratives offer instructors a way to render technology visible in our classrooms, in our research, and in our students' lives, helping our students be successful users of technology and successful writers.

## Appendix A. Appendix A

### *Technological Literacy Narratives*

#### *Part 1*

#### STEP 1:

Please do some fastwriting (either in a new word document or handwritten in your journal) in response to the following questions. Please try to write for at least five minutes in response to each question. Use as much detail as possible—try to imagine all the details (sights, sounds, etc) but don't worry about spelling, grammar, etc. (yet) . . .

- Please write about when, where, and how you *first* came to interact with computers, and how you first learned to use computers.
- How did you feel about computers when you were growing up? Did you like them? Why or why not? What did you use computers for (Games? Email? Writing?)?
- Have you ever used a social networking site (MySpace, Facebook, Twitter, etc.)? If so, what do you remember about your first experience with such a site? If you haven't used social networking sites, why not?
- Do you text on a cell phone or blackberry-type device? If so, what do you remember about your first experience with texting? If you don't text, why not?

#### STEP 2:

The process for the narrative you just started is based on Hawisher and Selfe's Technological Literacy Study and Seidman's phenomenological interview technique. The technological literacy narrative is designed to ask you, over a period of several sessions, to describe your early relationship with technology (particularly in regards to writing), to explain your current relationship with various technologies, and to reflect how these relationships have evolved over time. The narratives will encourage reflection on your past, present, and future relationship with technology.

Now that you've gotten a good start brainstorming I'd like you to expand on those questions through your writing, working to fashion a narrative detailing your past history with technology. Use the questions as a starting place but feel free to elaborate on issues or questions that are salient to *your* individual history. Later in the term I will ask you to look at your current relationships with various technologies, and finally I'll ask you to look to the future. To complete

the project you'll put all three pieces together, collage-style. But for now, please concentrate on your past history with technology.

*Technological Literacy Narratives*

*Part 2*

This section asks you to focus on your *present* relationship with technology. To get you started thinking about these questions I asked you to fastwrite in response to the following questions:

- Imagine that you have sat down to write a paper for class—where are you? What does it look like? What is surrounding you? Are you at a desk, on the floor, in the computer lab? Are there other people there? Are you listening to music? Are you using a computer, writing by hand, or taking notes on an Ipad? What utensils or tools are you using? What would we notice about you—are you fidgeting, relaxed, in a hurry? Pretend you are an outside observer watching you, and paint a portrait of yourself writing, so that we have a mental image of what you look like.
- Set up a dialogue between you and your computer—what would you say? If you have your own computer how might the dialogue go? If you don't have your own computer, think about what you might say to the computers at the lab, or wherever you work.
- Have you ever taken a class in a computer lab? What did you think at first about having class in the lab? What do you think now? Is this is your first class in the computer lab? How do you feel about having computers in classrooms?
- How confident are you of your current skills with computers—and with the various applications/programs/environments you use? In other words, what do use the computer for most of the time? What would you *like* to use the computer for?
- Currently, do you text? If so, what do you use? Describe a scene of you texting—Where are you? (In the car? In line at the store? At the movie theatre?) To whom are you texting? Do you type quickly? Slowly? How frequently are you texting? Show us your texting life right now. If not, please write about why you aren't a texter. Is it a lack of technology? A personal choice?
- Do you use social networking sites such as Facebook, MySpace, or Twitter at this time? If so, which ones? How frequently and for how long? How often do you update? What kind of writing do you do on these spaces? What do you use them for? If not, please write about why you don't use these sites.

These questions are encouraging you to reflect on your current use of technology. As with the last section, now is your opportunity to expand on your in-class writing and work towards developing a portrait of your current relationship with various technologies.

*Technological Literacy Narratives*

*Part 3*

This narrative is designed to ask you, over a period of several sessions, to describe your early relationship with various technologies, to explain your current relationship with technology, and to reflect how these relationships have evolved over time. This final section asks you to look both to the past, analyzing and interpreting your own history, and forward, speculating on what's to come.

To get you started, I asked you to fastwrite in response to several questions. Here are those questions, along with a few others to help guide your writing and thinking.

Looking back: these questions are designed to encourage you to review your story, elaborating on what you've already written.

- Looking back over what you have written in the first two sections, is there anything you'd like to add? Is there anything that seems to be missing from your earlier recounting of your relationship with technology?

Analyzing and Interpreting these questions invites you to examine your story critically, interpreting your experiences from a distance.

- Write a bit about what you notice about your story—what do you think is unique and interesting, what do you think represents a common experience most people share?

- Pretend you are an ethnographer or social scientist, what might such a person say about your story—how do you think they'd see it in relation to society at large?
- How does your narrative relate to others' narratives?

Looking forward: finally, this question asks you to imagine the future, describing what you think will happen next.

- What role do you see technology playing in your life and future? How do you feel about computers and the role they have and will play in your future?
- Do you think your writing will change based on new technologies? If so, how?

It is up to you how you'd like to make the final presentation of the narrative. It might be like a collage, with three distinct sections. Or you might want to blend it together into a more seamless narrative. And, of course, some of these questions and ideas will work for you, while others won't. Address the issues that seem useful and productive to you.

Please add this section on to Parts 1 & 2 of your technological literacy narrative in whatever way you see as appropriate, proofread carefully, and turn it in.

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