

# Integrating Usability Testing with Digital Rhetoric in OWI

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## Abstract

While usability testing can help instructors improve the design of online writing instruction (OWI), its emphasis on student-users sometimes overlooks the networked rhetorical ecologies in which those student-users operate, tilting online composition pedagogy toward neoliberal models of higher education that cater to the student-as-consumer. In response, I propose augmenting usability testing in online writing education with the theories of digital rhetoric. In the context of OWI, usability theory and digital rhetoric share a similar emphasis on the student as a user or audience, but they also have at least two key differences. First, unlike digital rhetoric, usability testing typically elides the political and ideological implications of student-users' experiences. Second, the usability theories of Jakob Nielsen, for example, tend to view online interfaces as static objects manipulated by users. Digital rhetoric, on the other hand, sees interfaces as dynamic, real-time interactions. Although both paradigms have their advantages, I argue that integrating usability testing with the theories of digital rhetoric can add complexity to researchers' understanding of OWI by revealing not only how students *use* online writing environments but also how they use them *rhetorically*.

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## 1. Transforming OWI with UX

Given the way that usability testing has transformed private sector industries, composition scholars have become optimistic that usability theories also might revamp online writing instruction (OWI). In 2006, [Susan K. Miller-Cochran and Rochelle L. Rodrigo \(2006\)](#) published one of the first articles in *Computers and Composition* that explicitly modeled the integration of usability testing with the study of OWI. After analyzing their data and pointing toward future research questions, they conclude with this claim:

We believe as more rhetoric and composition scholars, especially those in the field of computers and writing and technical communication, apply usability studies, theories, and methodologies to their research, reading, and writing, we will further expand our understanding of rhetoric and communicative acts. ([Miller-Cochran and Rodrigo, 2006, p. 105](#))

This statement suggests that the benefits of such a union are only unidirectional: usability testing fills previously unperceived gaps in “our understanding of rhetoric” (p. 105). In their edited collection, *Rhetorically Rethinking*

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*Usability: Theories, Practices, and Methodologies* (2009), Miller-Cochran and Rodrigo continue this investigation by examining “how usability studies have impacted theory and practice in rhetoric and composition” (p. 1). While much can and has been learned by incorporating user experience (UX) testing and user-centered design (UCD) into the field of rhetoric and composition, I contend that the inverse is also true: the theories of digital rhetoric can augment researchers’ abilities to design usability tests and to interpret their results in a way that acknowledges the complexity of digital interactions in OWI.

Usability testing can take many different forms. Many of today’s most popular usability theories and methodologies are shaped by the research of Jakob Nielsen (1993, 2000, Jakob Nielsen 2011, 2012, and Jakob Nielsen 2014). In the context of developing web applications, he defines usability as “how easy and pleasant these features are to use” (2012). Nielsen further specifies five key attributes that impact the user’s online experience: learnability, efficiency, memorability, errors, and satisfaction (2012). Within a specific online setting, researchers can evaluate these principles with usability tests such as think aloud protocols and task scenarios (1993, 2014). While Nielsen’s name may be synonymous with usability, other practitioners have developed similar methods for measuring the efficacy of UX and UCD. Many software design teams, for example, use agile development methods such as “scrum” (“What is agile”) and “story mapping” (Patton, 2014) to establish an interactive relationship between clients, developers, and project managers. As an extension of Nielsen’s usability theories, agile methodologies emphasize collaboration, responsiveness to change, and short development cycles (Beck et al., 2001). In addition to agile methodologies, other development teams may employ Eric Ries’ (2011) “Lean Startup” principles or the concept of “NIHITO visits” developed by Pragmatic Marketing (Foxworthy, 2014). Although each of these methods has their own lexicon and specific tactics for evaluating UX, they are all engaged in what Cait Ryan and Liza Potts (2015) call “participant-centered” research. Ryan and Potts (2015) suggest, however, that practitioners “stop arguing over the naming of these methods,” and, instead, “focus on effectively communicating our existing knowledge and experience.”

Although this call to unite related UX lexicons and strategies may ring true for the private sector, not all participant-centered research methods fit the educational context of OWI. Existing research in online writing, for example, tends to employ Nielsen’s traditional usability testing techniques such as think aloud protocols and task scenarios.<sup>1</sup> These methods appear to meet the needs of instructors and administrators who may have varying degrees of technical expertise and only limited control over the interfaces—like a learning management system (LMS)—that structure OWI. Although most online teachers can customize the configuration of their LMS, few, if any, online writing teachers actually design their own LMS.<sup>2</sup> As such, standard usability tests allow instructors to focus their research on the aspects of the UX that they have more control over. And while agile methods might offer more flexibility, collaboration, and real-time responses than Nielsen’s iterative usability testing, agile techniques seem better suited for the ongoing relationship between software developers and clients rather than the semester-length (or shorter) interactions between students and online writing teachers. In short, Nielsen’s web-based usability testing seems to offer more applicable techniques for evaluating the UX of OWI than other UCD strategies.

Despite the apparent compatibility of some methods of usability testing with the aims of OWI, the capitalist ideologies that undergird usability testing risk conflating students with consumers and mistaking higher education for a contemporary service industry. Nielsen, for example, foregrounds capitalist language in his explanation of the importance of usability: “The first law of e-commerce is that if users cannot *find* the product, they cannot *buy* it either” (2012). In the private sector, Nielsen (2012) claims that usability is more than just a mere component of consumerism; it also is the key mechanism that governs users’ social Darwinist behaviors on the internet. He writes:

[U]sability is a necessary condition for survival. If a website is difficult to use, people leave. If the homepage fails to clearly state what a company offers and what users can do on the site, people leave. If users get lost on a website, they leave. If a website’s information is hard to read or doesn’t answer users’ key questions, they leave. (Nielsen, 2012)

This live-or-die attitude toward usability marks the move from late capitalism to a post-capitalist economy driven by a burgeoning technologically-mediated service industry that emphasizes catering to the needs of the user. In the

<sup>1</sup> Examples of research that either directly applies or indirectly invokes Nielsen’s methods when studying usability and OWI include Arduser et al. (2011), Joseph Bartolotta, Tiffany Bourelle, and Julianne Newmark (2017), Stuart Blythe (2001), and Miller-Cochran & Rodrigo (2006).

<sup>2</sup> The exception here, of course, involves instructors who manage a writing course entirely through their own website.

context of higher education, this economic shift re-prioritizes the goals of American colleges. Where universities once functioned as sites for state-funded schooling (facilitated by the Morrill Land Grant Act) or as a social good for democracy (a view advocated by many classically-trained scholars), now administrators increasingly see higher education as a service industry designed to satisfy the needs of students.<sup>3</sup>

In response to this neoliberal view of college education, many universities have begun to craft digital and material “user experiences” for incoming students. These “first-year experience” (FYE) programs include designing athletic facilities, residence halls, dining options, online amenities, and entertainment opportunities all with the student-as-consumer in mind (Upcraft, Garner, Barefoot, & Associates, 2005). In the context of these administrative programs that treat higher education as a customer-centered service, it becomes easy for students to map these post-capitalist ideas onto online composition courses and to conflate UX with “classroom experience.” But UX is not a learning objective for writing classes, and it is not a quality that instructors evaluate during assessment. For most online writing instructors, UX is, instead, a key component of online learning but not an outcome of online learning. It is a means to an end but not an end in itself. Moreover, an online writing class is not a free market. If students are upset with the LMS design, they cannot use a different LMS to complete their homework. And if they do not like the videoconferencing application selected by the instructor, they cannot hold their own private synchronous class session on a different software platform. Although UX undoubtedly impacts online classrooms, it is not entirely governed by the extreme social Darwinism that Nielsen describes. Thus, although the American higher education system is shaped by post-capitalist ideas, students’ user experiences in OWI are not driven entirely by their own choice as consumers; their experiences are, instead, sifted through a collection of administrative, educational, and technical constraints.

While these Marxist critiques de-center UX relative to the core educational goals of OWI, usability testing can still be a valuable tool for composition instructors. As Miller-Cochran and Rodrigo (2006) maintain, usability design principles can contribute worthwhile insights to the work of instructional designers and online writing administrators. Usability research methods, in particular, provide a simple yet valuable set of tools for evaluating interface design and gathering information about students’ digital composition practices. This kind of measureable data can, in turn, help new designers and instructors accomplish the difficult task of constructing an OWI class from scratch. Usability testing might also help instructors craft best practices for designing OWI courses. The “Position Statement of Principles and Example Effective Practices for Online Writing Instruction” (2013), for example, acknowledges that “effective practices tend to be difficult to pin down in a fluid technological world. Yet, they certainly are needed as examples so stakeholders can understand ways to improve and support OWI education.” In many cases, usability testing can help researchers “pin down” pedagogical strategies across digital platforms, regardless of modest changes in a “fluid technological world.” Still, despite these benefits, employing usability testing *alone* to measure the efficacy of OWI classes risks embracing neoliberal principles that often prove noxious to educational environments and, particularly, to communities of writers. In response, I propose using the theories of digital rhetoric to extend the application of usability testing to OWI.

## 2. Distinguishing between Digital Rhetoric and UX in OWI

Since Richard Lanham first coined the term, “digital rhetoric” (1992),<sup>4</sup> scholars have disagreed about its meaning and scope. Some suggest that digital rhetoric involves the study of individual hypertexts (Landow, 1994) or of networked hypertexts such as the World Wide Web (Brent, 1997; Warnick, 2007). Others contend that digital rhetoric includes visual, screen-based, multimodal, and new media literacies (Heba, 1997; Welch 1999). And other researchers offer competing terms such as “computational rhetoric” (Grasso, 2002; Crosswhite, Fox, Reed, Scaltsas, & Stumpf, 2004), “technorhetoric” (Killingsworth, 2010), and “procedural rhetoric” (Bogost, 2007). Collectively, these scholars have contributed to the expansion of rhetorical theory from public speech and printed texts to various digital media. In an effort to acknowledge the incredible array of theories, methods, and analytical objects evoked in the term “digital rhetoric,” Douglas Eyman (2015) offers his own capacious description of the term as “the application of rhetorical

<sup>3</sup> For a thorough summary of the role of composition studies in American higher education, see the Introduction to *Exploring Composition Studies: Sites, Issues, Perspectives* by Kelly Ritter and Paul Kei Matsuda (2012).

<sup>4</sup> Lanham’s “Digital Rhetoric: Theory, Practice, and Property” (1992) was first published in Myron C. Tuman’s (1992) edited collection, *Literacy Online: The Promise (and Peril) of Reading and Writing with Computers*. It appears again in Lanham’s own monograph, *The Electronic Word: Democracy, Technology, and the Arts* (1993). Both chapters were based on a lecture that Lanham gave in October 1989.

theory (as analytic method or heuristic for production) to digital texts and performances” (p. 44). The breadth of his definition positions digital rhetoric as a set of portable concepts that can be applied to the study of a variety of mediated interactions, including the networked digital technologies that comprise the pedagogical medium for OWI.

Digital rhetoric is, however, conspicuously absent from much OWI research. For instance, [Scot Warnock’s \(2009\)](#) important monograph, *Teaching Writing Online: How and Why*, focuses on composition scholarship and not related rhetoric research. And the CCC’s “[Position Statement of Principles and Example Effective Practices for Online Writing Instruction](#)” (2013)—a landmark set of guidelines articulated by an intercollegiate committee of faculty members—eschews a rhetorical perspective altogether. Admittedly, some basic rhetorical concepts like audience, genre, and the three persuasive appeals may implicitly undergird online writing scholarship. But without deliberately attending to the ways that digital environments challenge and expand rhetorical theory, teachers and students may miss opportunities to develop a more robust framework for understanding their online writing practices. Indeed, as Kevin Eric Depew explains, “Students in OWI courses inevitably become practitioners of digital rhetoric because of the assignments they submit and the ways they communicate with their instructors and peers, but their practice can be (more) purposeful and consciously developed if they receive adequate preparation” (2015, p. 459). For Depew, an integral part of this “adequate preparation” involves learning that “digital rhetoric is not just about the *use* of digital communicative technologies” (p. 440)—as usability theory would suggest—but, instead, about the *rhetorical* implications of that usage. As such, distinguishing between usability theory and digital rhetoric can have important stakes for OWI.

One key difference between digital rhetoric and usability testing lies in the latter’s lack of attention to politics and ideology. While usability tests evaluate how students engage online interfaces, digital rhetoric helps both students and instructors uncover the “persuasive and ideological nature” ([Depew, 2015, p. 439](#)) of the interfaces they encounter online. [Cynthia L. Selfe and Richard J. Selfe \(1994\)](#) reveal, for example, how digital interfaces function as “sites within which the ideological and material legacies of racism, sexism, and colonialism are continuously written and re-written” (p. 484). Their rhetorical research discloses the ways that problematic assumptions about race, class, and gender seep into interface design. In a usability study, however, the political valence of these online interfaces might go overlooked in favor of more “practical” concerns how users complete tasks. But, as Stuart Selber suggests, rhetorically literate students ought to recognize that digital interfaces are also sites of “social action” (p. 161). Thus, while digital rhetoric and usability testing share crucial assumptions about the importance of digital design and users-as-audiences, employing UX methods *without* digital rhetoric risks eliding the social, cultural, political, and ideological stakes of partaking in an online writing course.<sup>5</sup>

Another subtle but important difference between usability studies and digital rhetoric resides in the implicit treatment of digital interfaces as static objects during a usability test. Nielsen’s “iterative design” process, for example, recommends that web designers alternate between configuring an interface and testing it with users, then reconfiguring the interface and re-testing it with users, one iteration at a time (2011). This procedure for testing interfaces mirrors the review process for print publications: authors compose texts and send them to editors for review, then the editor sends feedback to the authors who make those changes and send the document back to the editor. In fact, print metaphors like “webpages,” “digital texts,” and “online articles” dominate discourses about online interfaces. But these metaphors and Nielsen’s iterative design process both imply that web interfaces, like printed publications, are static objects alternately manipulated by users and designers but never at the same time.<sup>6</sup>

Digital rhetoric, on the other hand, views interfaces as dynamic sites of interaction. [Collin Gifford Brooke \(2009\)](#) encourages researchers to consider digital interfaces “less in terms of (textual) objects and more in terms of (medial) ecologies” (p. 23). The [www.fandango.com](#) interface, for instance, leverages cookies that respond to a user’s location, type of web browser, and, often—for advertising purposes—previously viewed websites. Even within a single usability test, these tracking technologies react to a user’s previous interface actions by auto-filling related search queries and changing the color of previously visited internal hyperlinks. In short, the [www.fandango.com](#) interface is much more dynamic than usability testing acknowledges. It is, instead, perpetually changing and adapting as users engage it,

<sup>5</sup> Although usability tests often obscure the political, cultural, and ideological contexts that give structure to digital interactions, [Emma J. Rose \(2016\)](#) and [Kirk St. Amant \(2017\)](#) have attempted to recuperate these important perspectives in the context of technical communication.

<sup>6</sup> Other processes for evaluating UX—such as Agile methods—offer a more nuanced view of interfaces, but those paradigms are rarely deployed in the context of OWI.

and, through this interaction, the interface becomes its own “distributed rhetorical ecology” (Edbauer, 2005). Thus, if researchers view interfaces like [www.fandango.com](http://www.fandango.com) as static texts or as passive tools, they risk reducing “vast, hybrid systems of intertwined elements,” (Brooke, 2009, p. 28) to bulleted-lists of design recommendations, and, in so doing, eliding key rhetorical components of these interactive systems.

In the case of OWI, adopting a static or dynamic view of interfaces invokes competing theories of composition. When a student completes a homework assignment on an LMS, for example, Nielsen’s usability theory understands each activity involved in this process—locating the assignment, reading the appropriate materials, composing a response, and uploading it to the LMS—as separate tasks that student-users complete with varying degrees of efficiency. In this context, usability theory echoes process models of composition that treat writing as a linear, sequential, rational, and autonomous process.<sup>7</sup> Post-process composition theories, on the other hand, view the act of accessing online homework and the practice of composing responses to that homework as equally important parts of the distributed and nonlinear nature of online composition. Thomas Kent (1999), a post-process theorist, contends that writing is not systematized, singular, or even anthropocentric. Instead, he understands composition as a convoluted endeavor that emerges from writers’ interactions with their environments. Similarly, Casey Boyle (2016) criticizes strictly procedural and rational conceptualizations of composition, and as a counterpoint, he articulates a posthuman practice of writing “as an ongoing series of mediated encounters” (p. 534). In the context of OWI, his posthuman theory of composition acknowledges that each interaction students have with an LMS while completing a homework assignment impacts their writing. Unlike Nielsen’s usability theory, which assumes a unidirectional relationship between an active user and a passive interface, Boyle blurs the line between the act of composing and students’ interactions with digital technologies. Like digital rhetoric, Boyle’s posthuman theory of writing highlights the ongoing, shifting relationship between student-users and educational interfaces in OWI.

Digital rhetoric, however, is not limited to just a theoretical tool; it can be a pedagogical one too. With its emphasis on dynamic and political interfaces, digital rhetoric can help students become more critical about the ways they navigate online environments. In my online first-year writing class, for instance, I often require students to conduct meta-analyses of their online interactions with each other. To accomplish this, I have students introduce themselves in a text-only discussion post on the first day of the semester. Then, during our first synchronous video class meeting, I ask students to compare the textual rhetoric of their asynchronous written posts in the LMS with the visual rhetoric of their self-presentation on the videoconferencing (VC) software. Because many students are not yet familiar with rhetorical analysis, I frame this discussion with a series of prodding questions:

- How did you want to be perceived in your written introduction? What compositional techniques—diction, style, punctuation, spelling, and so on—did you use to construct that textual description of yourself?
- How do you want to be perceived during this VC class? What visual and audio tools—microphone, camera, clothing, lighting, background—are you using to build that depiction of yourself?
- Compare the specifics of the textual medium and the VC medium:
  - In what ways do the two different interfaces limit the ways that you represent yourself? In other words, what can you *not* do in one medium that you can do in another medium, and how does that affect the representation of yourself?
  - Are there aspects of either medium that are beyond your control but still play an important role in how you depict yourself? If so, explain them.
  - How does either interface change in response to your engagement with it? And how do those changes impact the representation of yourself?

I never have time to ask all of the above questions during the first class. Instead, I often return to this list throughout the semester and try to help students develop an awareness of the ways that different online interfaces structure their educational engagements with each other. This is, however, a difficult activity, and although parts of it come intuitively to some students, I carefully contextualize it as an example of the kinds of multimodal rhetorical analyses that students will learn to conduct in this online writing class. By the end of the semester, this “meta” rhetorical analysis of students’

<sup>7</sup> For more information about process theories of composition, see Janet A. Emig (1971), Donald Murray (1972), Peter Elbow (1981), and Linda Flower and John R. Hayes (1981).



digital interactions with the OWI interfaces helps them develop their analytical skills as well as their awareness of the ways that they compose with/in digital interfaces.

In sum, while usability testing has productively transformed contemporary businesses, I caution against reducing students' engagement with OWI interfaces to mere task scenarios without also considering how those interfaces operate, rhetorically, in online classrooms. Although data from usability tests can help establish pedagogical benchmarks for instructional designers, they can also obscure the political, social, cultural, and ideological aspects of these interfaces that digital rhetoric makes visible. Nielsen's usability testing, moreover, assumes an oversimplified understanding of how users encounter interfaces and elides the interactive ways that every click and scroll contributes to an evolving rhetorical ecology expressed in students' engagements with the many digital interfaces of OWI. Helping students recognize the dynamic nature of their rhetorical encounters with OWI interfaces can, in turn, refine their composing reflexes in these online environments. As such, I contend that integrating digital rhetoric with usability testing could augment scholarly understandings of and student experiences with OWI.

### 3. Uncovering Digital Rhetoric within UX in OWI

While uniting digital rhetoric with UX may sometimes involve redesigning the original usability test at the outset, often it only requires greater attunement to the already-present rhetorical dimensions of digital interactions. In this section, I demonstrate how the complexities of student-users' rhetorical engagements in OWI can be understood from within an existing usability test. To do so, I re-read an article previously published in *Computers and Composition* that uses UX to examine the influence of audio communication in a synchronous MOO. My analysis of this publication reveals how the design of a usability test also evaluates rhetorical aspects of students' interactions in OWI. Then I show how the results of the usability test implicitly disclose the ways that OWI rhetorically impacts not just the user experience but also the learning outcomes of the online class.

The principles of digital rhetoric often covertly reside in usability testing. In "The Need for Rules: Determining the Usability of Adding Audio to the MOO" (Arduser et al., 2011), the authors use speak-aloud protocols to analyze the effects of adding audio communication to a text-based synchronous OWI class. Arduser et al. (2011) claim that incorporating audio in the MOO "enhanced the users' experiences" (p. 58) and "fostered a greater sense of social connection" (p. 62) among the participants. Increased "social connection" is a fascinating and surprising outcome for a usability study. If measured, for example, against Nielsen's (2012) five attributes of usability—learnability, efficiency, memorability, errors, and satisfaction—it is unclear which of these qualities governs "social connection." Insofar as rhetoric, on the other hand, may involve Kenneth Burke's (1950) notion of "identification" and the creation and erosion of social bonds between speakers and listeners, this improved "social connection" suggests that the MOO's audio also functions as productive *rhetorical* tool. The peculiarity of this finding points toward the latent rhetorical interactions embedded in this usability study and invites a closer look at their research.

From the outset, the design of the usability test employed by Arduser et al. (2011) evaluates both the usability and, indirectly, the rhetorical efficacy of the multimodal interface of their online classroom. Their test asks the students to complete seven seemingly simple tasks (p. 61):

- Introduce yourself to the class
- Review syllabus information
- Participate in discussion about class lecture
- Ask for clarification
- Chat (socially) with members of the class
- Present a document to the class
- Engage in an audio conversation

Six of these seven tasks involve dialoguing with other MOO participants, which evokes classical notions of rhetoric as the discursive exchange of information between speakers and audiences. Even "Review syllabus information"—the only task that doesn't require immediate correspondence—still involves the rhetorical interchange between syllabus-writer and syllabus-reader or, in this case, between teacher and student. Despite their systematic appearance, these tasks constitute rhetorical encounters and, as such, invoke a dense web of digital, political, ideological, and—as their data indicates—*social* connections. Viewing these procedures only as simple tasks to be completed risks overlooking

the rhetorical nature of these interactions. But adopting a broader rhetorical view of UX testing could, in turn, make visible the specific mechanisms that demonstrate *how* audio communication contributes to a “greater sense of social connection” (p. 62).

Similarly, usability testing often presents intriguing data sets, but, in the context of OWI, the interpretation of that data must account for the rhetorical complexity of digital interactions. [Arduser et al. \(2011\)](#), for example, note that the participants bemoan juggling between so many different modes of communication: visual, textual, and audio. One student explains, “I would have been more engaged in the text if I wasn’t speaking” (p. 62). From this participant’s perspective, completing the task of participating “in a discussion about class lecture” involves something “more” than simply exchanging words with other participants; it also implies a high degree of being “engaged” (p. 62). Given the emphasis that usability testing places on thinking (e.g. think aloud protocols), this student’s minimal engagement could easily be construed as a product of the excessive cognitive load demanded by multimodal communication (p. 62). A rhetorical perspective, on the other hand, recognizes that many other factors—including and beyond the intellectual—may be involved in such a discussion. For instance, perhaps this student refers to *pathos* and wishes to be more *emotionally* engaged in the conversation. Or maybe this student perceives being “engaged” as an *ethical* obligation to hear and to respond to her classmates, akin to [Krista Ratcliffe’s \(2005\)](#) notion of “rhetorical listening.” Thus, the emphasis on cognition in usability testing may yield a narrow interpretation of its results, while a rhetorical view of usability data could paint a more complex picture of the kinds of digital interactions that take place in OWI.

In some situations, usability testing may uncover important rhetorical outcomes, but the UX framework can sometimes result in a limited response to these results. In the [Arduser et al. \(2011\)](#) study, for example, multiple participants requested that the instructor provide guidelines for navigating the multimodal communicative options, including a “cue system and rules for ‘politeness’” (p. 63). But these results do not reveal a UX problem about how to *use* the technology more efficiently; nor do they lead to technical recommendations for adjusting the integration of tools in the digital interface. Instead, this evidence demonstrates confusion about the *decorum*—a classical rhetorical concept replete with social and ideological implications ([Duerringer, 2016](#))—of what constitutes appropriate communication in this multimodal environment. These results lead the researchers to claim that instructors should “set ground rules that create an environment of polite discourse in which students take turns to speak and in which spoken comments are acknowledged” (p. 65). Online writing instructors, in other words, are tasked not only with helping students *use* interactive communication technologies (ICTs) but also with helping students use ICTs *rhetorically*.

The subtle but important difference between using technologies and using them rhetorically constitutes, for [Stuart Selber \(2004\)](#), a hallmark of digital literacies. In *Multiliteracies for a Digital Age*, Selber explains that only knowing how to use a computer and its software programs elides the economic, political, social, and cultural aspects of using those technologies. He argues, instead, for three different kinds of digital literacies, including a “functional literacy” that extends beyond the “nuts-and-bolts” approach to literate activity endorsed by current-traditionalist rhetoricians (p. 32). Rather than defining technological literacy as simply understanding how to use a digital tool, he explains that functional literacy involves knowing how to use that tool within specific “technological contexts and [how to] develop a fluency needed to critique those contexts” (p. 73). In the case of [Arduser et al. \(2011\)](#), the usability test reveals this need for a contextualized functional literacy that reaches beyond simply learning to manipulate the audio hardware and software in OWI. [Arduser et al. \(2011\)](#), Selber, however, might not ask instructors to establish discursive “ground rules” ([Arduser et al., 2011, p. 65](#)) because such an act could reify the unequal power dynamics implicit in decorum. In place of prescriptive “how-to guides” (2004, p. xii), Selber advocates for “heuristic approaches” (p. xii) to teaching technology that encourage students both to construct and to challenge the decorum—and its tacit ideology—that structures digitally-mediated communication. In this way, UX research uncovers important rhetorical concerns, like decorum, that theories of digital rhetoric and digital literacies can address with a level of complexity appropriate for the intricacies of OWI.

Like [Arduser et al. \(2011\)](#), I support evaluating OWI “technologies from a student point of view” (p. 58), but I maintain that adopting a student-centric perspective *only* through usability testing risks overlooking important rhetorical implications embedded in the complicated web of humans and technologies involved in OWI. Instead, I suggest using the theories of digital rhetoric to augment both the methods and the results of usability testing in OWI. Usability testing, I contend, is necessary but insufficient for developing effective OWI, unless it is also coupled with the theories of digital rhetoric.

#### 4. Integrating Digital Rhetoric with UX in OWI

While the [Arduser et al. \(2011\)](#) study demonstrates the unexpectedly imbricated relationship between digital rhetoric and UX in OWI, instructors could benefit from better understanding how to deliberately integrate both theoretical paradigms in their online classrooms. Following [Selber's \(2004\)](#) advocacy for heuristics—rather than codified rules—in the context of digital literacies, I close by offering a set of flexible strategies for integrating digital rhetoric and UX that might help online writing instructors, designers, and administrators better evaluate and understand their own online writing courses. These heuristics are derived from the previous pages' examination of the theoretical relationship between digital rhetoric and usability studies as well as from the analysis of the usability test by [Arduser et al. \(2011\)](#). Like any set of heuristics, this list is not exhaustive and subject to change as the technologies and pedagogies that structure OWI evolve over time.<sup>8</sup>

##### *Designing UX Testing for OWI:*

- Understand that tasks are never neutral acts and, similarly, know that the subject positions of student-users impact how they navigate these tasks. As such, be able to articulate the political, cultural, and ideological implications of task scenarios before administering them, and be attuned to the subjectivity of the student-users who participate in the study.
- Acknowledge that digital tasks are not only separate actions but also each part of a sequential and ongoing interaction with digital interfaces. As such, design task scenarios that take a more holistic view and investigate how student-users negotiate the relationships between tasks too.
- In think aloud protocols, encourage student-users to verbalize more than just cognitive responses to navigating an interface. Urge them also to describe their emotional, ethical, and social reactions, among others.

##### *Interpreting UX Results for OWI:*

- Situate the results of a usability test within the overlapping political, cultural, ideological, and educational contexts that give implicit structure to the data.
- Be able to describe—at any point in a student-user's interaction with a digital interface—the multiple agents and power dynamics that structure these shifting rhetorical ecologies. Track changes in these rhetorical engagements as they evolve.
- Find other ways of measuring the efficacy of digital interfaces in addition to speed and self-reported (dis)pleasure. Consider assessing how digital interfaces spur rhetorical interaction, build community, stimulate analytical thinking, or motivate certain compositional practices.

##### *Configuring Interfaces for OWI:*

- Examine not only the efficiency of design choices but also the implicit political, social, cultural, and ideological effects of those digital designs. Know who is affected by certain design choices and how.
- Resist making design choices based only on “normative” student-users, which can disadvantage marginalized students and those with disabilities.
- Recognize that OWI interfaces function as dynamic rhetorical ecologies. As such, design OWI interfaces to facilitate not only task completion but also to create thriving online composition communities.

##### *Implementing Pedagogical Strategies for OWI:*

- Teach student-users not only how to *use* online pedagogical technologies but also how to use those digital technologies *rhetorically*.

<sup>8</sup> These heuristics apply only to integrating UX and digital rhetoric *in the context of OWI* and not necessarily for private sector software design or face-to-face composition pedagogy.



- Ask student-users to analyze the political and ideological assumptions implied in the arrangement of the online writing course and its digital technologies.
- Encourage student-users to interrogate how the affordances and constraints of digital technologies—including the evolution of OWI interfaces over the course of the semester—impact their own writing.

These heuristics offer recommendations for creating new usability tests and analyzing their data as well as for designing digital interfaces and structuring teaching activities in the context of OWI. Together, they demonstrate how integrating digital rhetoric with usability testing can help researchers cultivate a more complex understanding of how students, instructors, and interfaces interact in OWI. Without digital rhetoric, usability testing may improve things like LMS design, but it also risks positioning students, like clients, as mere consumers of knowledge. Augmenting usability testing with digital rhetoric contributes not only to a more dynamic understanding of how instructors and students interact with/in the many interfaces of OWI, it also can help OWI resist neoliberal ideals that may undermine the communal and intellectual aims of rhetoric and composition.

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