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Composition 2.0: rethinking Web literacy for the twenty-first century classroom

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Composition 2.0: Rethinking Web literacy for the twenty-first century classroom

by

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in partial fulfillment of the requirements for the degree of

MASTER OF ARTS

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Program of Study Committee:

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Ames, Iowa

2008

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CHAPTER 1: INTRODUCTION

1.1 Overview of subject

Today, first-year composition instructors wrestle with the need to stay current with technologies in the classroom while adhering to traditional student-based writing outcomes. At the same time, we struggle to find the most efficient way to contend with a whole host of twenty-first century multiliteracies, a phrase that can be ambiguous even to the most seasoned of rhetoric and composition scholars. Among them, Sean D. Williams has succinctly captured what it means to be literate in the twenty-first century, claiming

it means possessing the skills necessary to effectively construct and comfortably navigate multiplicity, to manipulate and critique information, representations, knowledge, and arguments in multiple media from a wide range of sources, and to use multiple expressive technologies including those offered by print, visual, and digital tools. (“Part 1” 22)

Though many definitions attempt to capture the complexities of “multiliteracy,” Williams’ will neatly serve my purposes on the subject in this project.

Our students certainly seem adept at using multiple expressive technologies to communicate in and out of the classroom. As teachers in a changing field, we need to be prepared to keep pace with and enhance the communication education of “digital natives,” a term coined in 2001 by Marc Prensky to describe students who grew up using digital technologies like the personal computer and the Internet. For instance, we should not take for granted that being “digital natives” automatically imbues our students with digital literacy, as several of them come from the technological underclass where access to these digital contexts is limited. Particularly, we should take an interest in how they interact with digital technologies. In a first-year composition classroom, we often see students conspicuously

managing content online, so of utmost importance to us is Web literacy. Surely, then, our field will benefit from a clearer understanding of what it means for digital natives to be “Web literate”—to meaningfully interact with their native online environments—and how we can foster this literacy. Our work toward these ends is ongoing and unending; the Web changes and grows in new directions every day, and an effectively develop pedagogy of Web literacy demands that we continuously examine new ways we can use the Web as a teaching tool in the composition classroom.

To be clear from the outset, the discussion of Web literacy pedagogy put forth in this thesis is aimed at a two-course sequence of first-year composition. Obviously, not all composition curricula are structured the same way, and different universities highlight any number of different emphases for the basis of their first-year courses (e.g., writing across the disciplines or multimodal communication). For the purposes of this argument, I see my discussion as being most applicable to teachers in first-year composition classrooms who are encouraged by their writing program administrators, department heads, and university faculty to embrace diverse forms of writing instruction, including those that employ new communication technologies to enhance the composition skills of their students. While some readers may assume that composing on the Web should be reserved for higher-level courses in business, technical, or professional communication, I will show not only how first-year students are capable of writing for the Web but also how doing so can benefit their communication practices in other modes and social contexts.

To begin this examination, it might be helpful to start with a an understanding of why Web literacy is related to the multiliteracy conversation. Just as the Web is dependently integrated with the Internet, so too must Web literacy be integrated with other literacies. It is

hardly reasonable to expect students to grasp the outcomes and goals of a Web literacy assignment if they cannot locate a Web browser to begin with. Instructors need a comprehensive understanding of twenty-first century multiliteracies, then, to consider when designing and implementing a curriculum for a first-year composition course. We can begin to realize the pedagogical value of Web literacy in rhetoric and composition studies if we accept two conditions. First, that Web literacy is a multiliteracy, inextricably linked to the other multiliteracies of information, visual, and digital in the Information Age. Second, that Web literacy can be approached in new ways as a conceptual literacy—to think of its definition as dependent on the needs of the context.

It is important here to pause and stress that I am not seeking to exalt Web literacy as inherently superior to any other twenty-first century multiliteracy. Doing so is misleading, as Kathleen Tyner argues in *Literacy in a Digital World*: “[r]hetoric that seeks to prove the dominance of one multiliteracy over another raises the specter of yet another set of false dichotomies. Inauthentic continuums of this kind are decidedly beside the point” (93). Tyner goes on to offer up a challenging gap for us to address as rhetoric and composition scholars, arguing that we need more “collective, cross-disciplinary efforts” to address the changing demands of literacy instruction and to better serve our students as well. She continues to claim that since multiliteracy scholarship is being addressed from multiple and differing angles, we have difficulty establishing “a coherent theory base for its incorporation” into education. Until we can create such a theory base, she argues, “organizing the independent ideas of the various multiliteracies into a vision for literacy...is like to trying to herd cats” (97). My contribution to this coherent theory base is from the perspective of Web literacy, though other scholars have certainly addressed multiliteracy in their own ways. Our field and

our students will certainly benefit from every extensive and collaborative effort, like Tyner's or mine, to round up the diverse cats of twenty-first century multiliteracies in composition studies and herd them into the same corral.

While a compelling body of research has already been created around twenty-first century multiliteracies like digital, computer, technological, information, visual, and network literacies, and a familiar roster of names seems to appear in the bibliographies of each, with the likes of Cynthia Selfe, Gail Hawisher, Anne Francis-Wysocki, Kathleen Tyner, and Kathleen Yancey, to name a few, I find Stuart Selber's work with conceptual approaches to literacy to be incredibly insightful and worth expanding into other areas (like the Web). Selber models these conceptual multiliteracies in terms of a stratified paradigm, in which students acquire literacy at the functional, critical, and rhetorical levels (see Table 1).

Table 1: Selber's conceptual landscape for computer literacy (p. 25)

Category	Metaphor	Subject Position	Objective
functional literacy	computers as tools	students as users of technology	effective employment
critical literacy	computers as cultural artifacts	students as questioners of technology	informed critique
rhetorical literacy	computers as hypertextual media	students as producers of technology	reflective praxis

He works primarily with computer literacy to define these conceptual levels, and I will use his work to define these levels according to Web literacy. Computer and Web literacy are but two of many multiliteracies, and creating separate conceptual models for each of the rest of these goes beyond the scope of this thesis. For now, it might be helpful for us to think of these literacies existing as a nebulous cloud from which we might pull one—such as Web—to assess in terms of student-centered conceptual stratification, as illustrated in Figure 1.

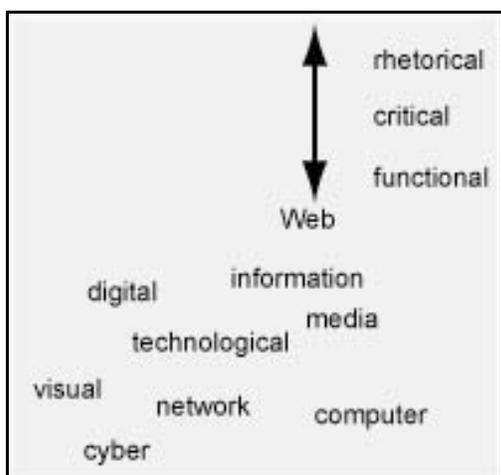


Figure 1: Twenty-first century multiliteracies can be rethought along a layered, trifurcated model of conceptual levels.

These conceptual levels are structured hierarchically, wherein students use functional as the first point of entry for literacy acquisition, and gradually work their way up to the other two. Here, as Selber’s table shows, functional literacy might be thought of as using a tool, critical literacy might be thought of as consciously questioning the implications of that use, and rhetorical literacy might be thought of as reflectively producing and using communication with this critical awareness in mind. Because Selber’s model presents rhetorical literacy as comprising the others, we might be tempted to prize it first and foremost. Doing so, however, negates the contexts in which our students might need to rely primarily on functional or critical literacy to succeed. But, in Selber’s words, “[a] curricular implication of this relationship is that rhetorical literacy might prove to be a particularly challenging place to start” (25). Therefore, my contribution to the multiliteracy conversation is to advance a pedagogy that updates Web literacy instruction for all three levels, like Selber does with computer literacy instruction, and one that targets the needs of first-year composition students. Some of these students may have already developed their functional

literacy, while others may be a long way off from doing so; it is our task as responsible instructors to be aware of the individual circumstances surrounding each student's multiliteracy development.

Barbara Blakely Duffelmeyer addresses these circumstances with computer literacy at the functional and critical levels, and Selber considers computer literacy at these levels and at the rhetorical level as well. Using Selber's work in computer literacy as a guide, I hope to define what it means for a composition student to be functionally, critically, and rhetorically Web literate in the twenty-first century. However, to update these definitions, we also need to know what work has been done to define Web literacy in our field before this thesis.

Surveying the research on Web literacy to date is somewhat difficult since journal articles and/or books rarely identify Web literacy as the target of their argument. This may be a consequence of our outdated definitions. Digitally native students today are much more familiar with hypertextual environments than their predecessors from 15, 10, or even five years ago, and because hypertext was an early focus of Web literacy studies in the early 1990s, it is no longer a "new" concept in composition. Web literacy as it had been defined has lost substantial currency as an area of research, but one of the first publications to explicitly address the topic is Madeline Sorapure, Pamela Ingelsby, and George Yatchisin's 1998 article, "Web Literacy: Challenges and Opportunities for Research in a New Medium." In it, they present a discussion of Web literacy as its own subdivision of today's multiple literacies, claiming that students need to be able to "manage the diverse and largely unfiltered content of the Web" with an "attentiveness to the information conveyed in a site's nontextual features, most notably its images, links, and interactivity" (409). They stressed the need to add "new strategies for making sense of diverse kinds of texts presented in

hypertextual and multimedia format” to our traditional criteria for assessment and evaluation of print-based sources. Practicing Web literacy skills, they argued, will support our students’ communication skills in other genres and modes, and is also “an important step in educating students to be critical users of the Web and the Internet” (409).

The impetus for Sorapure, Inglesby and Yatchisin’s argument came from the academic conversation leading up to their publication date. The focus in computers and composition pedagogy of the early 1990s—when the Web was new and capturing the attention of an entire generation of students and researchers—centered on how to help students learn their way around hypertextual environments in the college classroom (Slatin). Much had changed to this point since the Mosaic browser offered Web tyros the opportunity to explore the relative paucity of sites and pages available online, and still much more has changed since Sorapure, Inglesby and Yatchisin first approached “how a close and careful reading of Web sites can enhance students’ research and writing skills,” presenting their research as “an important step in educating students to be critical users of the Web and the Internet” (423). They also hinted at the foundations of multi-dimensional conceptual Web literacy, claiming that evaluating Web sites for their research credibility can lead to more critical engagements about the “social, cultural, political, and economic implications of this new medium of communication” (423).

The time is appropriate to continue their calls for a reassessment of Web literacy. We need to reevaluate our own understanding of the subject so that we may expand their efforts to address the Web in the individual but related dimensions of functional, critical and rhetorical literacies. Modifying our approach, especially in light of the radical changes to what has come to be known as Web 2.0 in recent years, will help reshape our best practices

in composition instruction for the beginning of the twenty-first century. In comparison to similar multiliteracies, though (like technological or visual literacies), little has been written on how we might approach an updated pedagogy of Web literacy strategies for the twenty-first century composition curriculum. My contribution functions as a response to and updating of Sorapure, Ingelsby and Yatchisin's argument, 10 years after their publication, in light of the radically changed Web and in light of Selber's pioneering work with conceptual literacies. For this refocusing, I adapt Selber's model to embrace a definition of Web literacy that addresses student learning needs on multiple levels of functionality, critical thinking, and rhetorical production.

Throughout my thesis, I intend to show how radical changes in the nature of the Web, from the dot-com bubble of the late 1990's to the Web 2.0 applications of this decade, demand a new approach to Web literacy in the twenty-first century. We can prevent Sorapure, Ingelsby and Yatchisin's clarion call for new opportunities for research and pedagogy from becoming a swan song for Web literacy studies by addressing a number of questions. For example, how are the new definitions of multiliteracies in the Information Age shaping composition pedagogy? What are the principles articulated by twenty-first century multiliteracies, and how are they related? How can we, as progressive scholars and instructors in the field of rhetoric and composition, best position ourselves to address the Web literacy needs of incoming classes of students in the near-future? What best practices for Web literacy pedagogy can be gleaned from these principles? What are the implications of rethinking Web literacy, and in what ways might future research help shape this new perspective? Over the course of this project, I seek to answer these and others that arise naturally during the process of such an extended inquiry. Hopefully, these answers will

reignite the spark for Web literacy studies and help advance our understanding of the ever-changing needs of the digital natives in our charge.

1.2 Preview of chapters

My argument in this thesis is laid out over five chapters. In Chapter 2, “Lit(eracy) Review,” I briefly survey the related multiliteracies that affect Web literacy to explore how new definitions of multiliteracies in the Information Age are reforming the shape of composition pedagogy. I introduce definitions and discussions of several key twenty-first century multiliteracies, linking them with their related scholars and disciplines. Finally, to build the framework for my theory in Chapter 3, I introduce Selber’s conceptual levels of functional, critical, and rhetorical literacies.

With this definitional work in place, I open Chapter 3, “Web Literacy Today,” with a justification for updating the subject now: as we edge toward the close of the first decade in the new century, the Web has changed dramatically since the close of the last decade. Having established the need for a new approach, I apply Selber’s three-tiered scheme of conceptual literacy (functional, critical, rhetorical) in a slightly different way to propose an updated theory of Web literacy pedagogy, based on the parameters of content and identity.

In Chapter 4, “Web Literacy in the Classroom,” I move from how we might rethink our notions of this subject to how it applies to our pedagogy. I discuss how effective instruction can help our students become active members of the social writing public, and how we need to adjust our assessment models to accommodate this change. Because many teachers may be averse to using the composition course for writing on the Web, I talk about this tension between traditional academic writing instruction and the need to stay current

with emerging communication technologies. Finally, I introduce my own experience as an instructor and how that might shade my perspective on this topic before imagining a few examples of Web literacy activities for the classroom that instructors might implement. I reflect on how these align with the new approaches I put forth earlier and with the calls for new models of multiliteracy development, then present an assembled list of best practices that covers the material in this chapter.

My research concludes in Chapter 5 with important considerations for the future of this work. I offer three specific proposals for further research that pick up where this project leaves off. While these are only suggestions, they offer my colleagues the opportunity to address other dimensions of Web literacy research, such as what our students know when they enter the composition classroom and what teachers are doing to augment that during the first year. As a final note on the implications of multiliteracy research, I offer my observations on the evolving nature of technologies and culture, on technological determinism in the composition classroom, and on twenty-first multiliteracies as moving targets.

CHAPTER 2: LIT(ERACY) REVIEW

In this section, I briefly introduce definitions of related multiliteracies as presented by influential scholars in our field. Next, I focus on the debate over whether our scholarly conversation would benefit from a reduction or simplification of these numerous multiliteracies. I argue neither for a reduction nor an all-inclusive tent; instead I echo calls of previous scholars to approach multiliteracies by conceptual level instead of by tools, systems, or artifacts. Functional, critical, and rhetorical—Selber’s conceptual levels of twenty-first century multiliteracies referred to earlier—become the final focus of this chapter and provide the framework for an updated model of Web literacy, which is the subject of Chapter 3.

This chapter begins with a discussion of several twenty-first century multiliteracies. A survey of the related literature on these topics—such as digital, technological, visual, or information literacies—reveals that scholars contributing to the conversation are reluctant to adopt a singular, common definition for any multiliteracy, perhaps because each researcher has a different opinion on the most effective approach to literacy pedagogy. Since no classroom context is exactly the same, and no definition or approach is all-encompassing, we can embrace this definitional diversity as a chance to explore the most fitting methodology for our own students. And, because Web literacy belongs to a class of twenty-first century multiliteracies, it is important first to know how the field of rhetoric and composition defines other prominent literacies in this class; doing so enables us to embrace definitional diversity more productively. Tyner, for one, would endorse this approach. She argues that “an examination of these literacies in isolation from one another does little to promote either clarity or utility” (60).

Before we delve into each of these definitions, it is useful to refer to a resolution adopted in February of 2008 by the National Council of Teachers of English (NCTE) executive committee, regarding twenty-first century literacy definitions. This NCTE resolution, “Toward a Definition of 21st-Century Literacies,” serves our purposes here as the widely accepted, administrative voice in rhetoric and composition studies. The NCTE executive committee recognizes that literacy in the twenty-first century goes beyond the limits of alphabetic, and a literate student must rely on numerous proficiencies through numerous literacies (para. 1). Twenty-first century literacies, as we will see in this chapter, are “multiple, dynamic, and malleable” (para. 2), indicating our need as scholars and teachers to frequently revisit our research and pedagogical approaches to composition practices in the twenty-first century.

2.1 Related multiliteracy definitions

2.1.1 Digital, computer, technological

I begin the discussion of multiliteracy definitions by identifying three almost interchangeable terms: *digital*, *computer*, and *technological* literacies. The first of these, digital literacy, seems to be defined primarily as a contrasting yet complementary literacy to print (Faigley; Jones; Tyner; R. Selfe). As Allan Martin explains, the term gained currency courtesy of Paul Gilster, who defines digital literacy in his influential 1997 book *Digital Literacy*, as ‘the ability to understand and use information in multiple formats from a wide range of sources when it is present via computers’ (Gilster 1)” (as qtd. in Martin 18). Here, computers are the primary vehicle for literacy practices that occur without print: students process and understand information either on page or on screen. And while it is obvious that

the use of digital technologies has proliferated among our students—walking into class on their cell phones while shuffling music on their iPods and organizing their PDAs—literacy with these technologies is not the focus of this thesis, and neither is literacy with computers.

Confining Web literacy to a subset of computer literacy seems to reduce the former to a mere application or tool of the latter, which in turn would severely limit its pedagogical possibilities. Clearly, though our responsibility to computer literacy in the classroom is evident, especially because many of our composition courses include class time in the computer lab. In fact, as Selber argues that “for better or worse, computer environments have become primary spaces where much education happens” (3-4). Computers have arguably taken a central function in our daily lives; it follows that the need for well-guided computer literacy instruction must also take a central function as well. However, Tyner predicts that computer literacy will wane as a multiliteracy of interest, not because it will become any less important but because computer skills will become, like alphabetic literacy, an assumed competency for digital natives. As a result, the term will need less emphasis in multiliteracy studies and rhetoric and composition. Because computers do not occupy an exclusive position in our digital communication practices, a more inclusive view of literacy must exist as well that is not limited to a singular artifact.

Technological literacy offers that inclusive view of digital communication practices. For a brief overview of this competing multiliteracy and its sometimes-convoluted definitions, few are better versed than Cynthia Selfe, whose scholarship on technological literacy—indeed multiliteracies in a broader sense—is among the most actively cited in the field of computers and composition. Selfe investigates our relationship with technology in terms of the struggles and debates that shape it. Educational initiatives, funding increased

access, staying competitive in the global market: all of these issues are central motivations to Selfe's research, and she places them squarely within our professional field. "For [rhetoric and composition] teachers, literacy instruction is now inextricably linked with technology" (Selfe "Technology" 5). Having forged the links between our field, technology, and literacy, Selfe then focuses on the "Technology Literacy Challenge," a federal literacy project started in 1996 which called for an expansion of technological literacy in American education. Though broadly conceived with well-intentioned goals, Selfe argues, the project has significant shortcomings, characterized by the government's definition of technological literacy as merely functional and too narrow to address the diverse needs of students in the twenty-first century.

To overcome this problem, Selfe suggests a broader definition of technological literacy "as a cultural phenomenon." This description encompasses the functional aspects of computer literacy but places more emphasis on challenging our students to use electronic environments to more actively engage in social and cultural discourse, taking technological literacy beyond the walls of the classroom. Her term "further refers to the linking of technology and literacy at fundamental levels of both conception and social practice" (11), making it more applicable to the conceptual approach I will take as well.

This definition brings computer literacy under the domain of technological literacy, and it compels us to consider literacy as a conceptual practice, much like Selber does. Technological literacy may be an imperceptible distinction from digital literacy, as Richard Selfe observes, so to try and separate them may be a fruitless endeavor as "these multiliteracies often appear in the subject index of books as the same term" (186). Regardless of the term we choose to explain the digital nature of Web technologies as we use

them on and off the computer, the emphasis on literacy instruction should include, like Cynthia Selfe reminds us, the situated social and cultural practices of this use, and how we can use this contextual reflection to help our students produce better informed compositions.

2.1.2 Visual and information: exploring literacies of representation

I now explore a category of multiliteracies described by Tyner as “literacies of representation,” so called because “they address the construction of information, as well as tools.” Two in this category—visual and information—are particularly relevant to my discussion and because of their emphasis on understanding the pathways necessary to make meaning and understand, through analysis, how meaning is created (92). Tyner also observes that although the competencies and principles of twenty-first century multiliteracies may overlap significantly, their core supporters see very different applications of each as well. While these constituencies may be radically different in their professional and personal lives, they all have a common meeting place: the Web.

The first of these literacies of representation, visual literacy, is among the oldest non-verbal literacies to gain currency in the composition classroom alongside verbal literacy (Bernhardt; George; Hocks; Kress “Reading”; Stroupe). In addition to playing an increasingly crucial role in the composition classroom, visual literacy is also an indispensable component of Web literacy. This link is observed by Cheryl Glenn and Melissa Goldthwaite in their discussion of designing effective writing assignments, in which they acknowledge “the visual aspect is nearly as important as the words” when writing for the Web (96).

Similarly, both Mary Hocks and Craig Stroupe acknowledge the “hybridity” of the verbal and the visual as they play out in the varied digital writing environments that comprise

the Web. Hocks acknowledges the Web's visual nature as a "rhetorical act of reading and authoring" (631), processing graphic-laden screens by using the visual navigation prompts like headers, links, and other non-verbal cues. Stroupe, meanwhile, asserts that "in an economy and culture increasingly mediated via Internet browsers...verbal literacy is not replaced or buried so much as layered *into* a more diverse amalgamation of literacies," Web literacy principal among them (608).

Cynthia Selfe has also explored the use of visual literacy in the classroom. Drawing on influential scholars like Gunther Kress and Theo van Leeuwen, as well as John Debes and Clarence Williams, Selfe defines visual literacy as "the ability to read, understand, value, and learn from visual materials—especially as these are combined to create a text—as well as the ability to create, combine, and use visual elements...and messages for the purposes of communicating" ("Toward" 69). The emphasis in Selfe's definition of creating a text is especially germane to the literacy of the Web, where the notion of what constitutes a "text" is constantly changing.

These variegated texts surround our students with an endless barrage of visual messages, and these include everything from images and streaming video, to font color and size or the deliberate composition of page elements. To technological neophytes or those primarily accustomed to verbal texts, this can be a hopelessly confusing experience or one to which they are not accustomed to paying much attention, processing the visual at a level below awareness. We need to do our part as educators to allay some of their confusion. Stroupe, like Hocks and C. Selfe, is a very vocal advocate for the importance of visual literacy in the composition classroom. He recognizes the unique significance of how visual aspects of the Web directly influence its users' experiences, showing special concern for the

user-designer relationship and astutely observing that the Web allows for increased user flexibility in determining presentation of the visual elements of a text (616).

If the Web were purely a visual medium, presented in a logically ordered and accessible fashion, we could relegate Web literacy to a subdivision of visual literacy and there would be no need for this thesis. However, all of us have probably been frustrated by being unable to locate an important answer on the Web and on these occasions, it is a chaotic universe of information. Exploring that universe with any hope of seeking one's intended answers requires a sophisticated level of information literacy as well.

The bond between Web and information literacies is obvious to anyone who has helped a student perform an online search, and the need to help them help themselves in the composition classroom should be obvious as well. Shawn Apostel and Moe Folk address this need by arguing that we should "empower our students as active participants in negotiating multimodal sources as well as active contributors to multimodal Web culture since they are remaking the Web just as the Web is shaping them" ("Call for a New Method"). Apostel and Folk here are similar to Stroupe and C. Selfe in that all four scholars emphasize the active, participatory nature of Web contexts.

This participatory nature is stymied if students cannot find what they need, an effort that Lester Faigley captures thusly: "finding information on the World Wide Web has been compared to drinking from a fire hose. The quantity is overwhelming, even to experienced researchers" (134). Glenn and Goldthwaite express a parallel concern about the Web because it "tosses so much data at a user that sifting through it is often as much work as finding the information in a more ordered source" (231). Since the Web is an invaluable resource to fostering composition pedagogy, our task as instructors is to ensure that our students are not

turned off to the useful content available on the Web by the frustrations that can come from trying to find it.

Therefore, our students should be taught to navigate the Web on their own for the purposes of finding the useful information they need to succeed, and we will need to assume responsibility for teaching Web-based information literacy in the composition classroom. Many teachers have already recognized this crucial relationship by allowing students to use the Web for resources in the documented research essay assignment, a common component of first-year composition courses. But while the use of the Web for research in the composition classroom may make some writing teachers uneasy, owing to its anyone-can-publish-anything nature (Glenn and Goldthwaite 229), introducing the Web as part of the research process can be an invaluable decision, one that helps our students become discriminating judges of the abundance of content online. Provided that discriminating evaluation is an embedded activity in the research process, the Web can be used to foster a greater level of information literacy, rather than detract from it (Apostel and Folk; Janes; Walton and Archer).

With technological, visual, and information literacies handled, I will now briefly discuss those terms that have lost significant currency with scholars in our field in more recent years, but that played an integral role in the multiliteracy conversation leading up to my thesis. I will start with cyberliteracy.

2.1.3 Cyber and network

Cyberliteracy as a term in multiliteracy studies has lost a lot of currency, probably on a parallel to the gradual decline of the use of “cyberspace” to describe the World Wide Web

over the past decade. It might be the most closely related term to Web literacy, perhaps interchangeable with “Internet” literacy as well. Cyberliteracy promotes a meaningful interaction with online texts, effectively bridging the literacy gap between print and electronic. Before its waning, Laura Gurak was cyberliteracy’s most active champion. In her flagship book, *Cyberliteracy*, Gurak defines the term as “a set of concepts and critical views with which to understand today’s Internet” (3). She views cyberliteracy as a confluence of print, visual, and oral literacies, relying on Walter Ong’s influential work with orality to show that

A keystone of cyberliteracy is being keenly aware of the crucial relationships among communication technologies and “ourselves, our communities, and our cultures” (16). This approach acknowledges a critical literacy beyond the level of functionality; however, Gurak does not lay down specific criteria for functional skills in cyberliteracy, and this may account for the term’s failure to take hold in the discipline or with the public. Without a full understanding of any multiliteracy at the functional level, students and teachers alike may be a hard sell on the need for “a new literacy, a critical literacy, for this new medium” (11). However, my model of Web literacy will draw on a very similar critical approach, so I am indebted to Gurak for attempting to bring the attention of our field to this multiliteracy.

Another term that has lost currency in the conversation is network literacy—generally, “the ability to access and use information from an electronic network” (McClure 115). Scholars have become accustomed to sharing and accessing information via networked technologies, so the excitement of doing so (and writing about it) has diminished since the turn of the century; network literacy seems to be an assumed skill nowadays. However, the emphasis on situated electronic social and cultural contexts, like C. Selfe’s with

technological literacy, remains an important part of network literacy. Charles McClure's reductive definition of network literacy is complemented by a more complex approach that stresses awareness and understanding "of the range and uses of global networked information resources and services" (119).

Douglas Hesse has undertaken a limited exploration of network literacy as well. His argument came from a time when listservs and newsgroups were more prominent in connecting people over the Internet than they are today, thanks in no small part to the evolving and improving experience of the Web. Hesse argued that network literacy is more prevalent in "email driven media like listservs or Internet relay chats ... which exist because of the interdependency of writings that constitute them (44). Today, listservs have been largely displaced in popularity by more flexible forms of participatory social media on the Web, like blogs and wikis. However, these social networks would not exist without network literate people to run them, so while this subject may have been relegated to much lesser importance, it still provides an important piece of the Web literacy puzzle I will attempt to assemble more thoroughly in Chapter 3.

Each of the foregoing literacies contributes in a meaningful way to the multiple dimensions of Web literacy that I intend to present in Chapter 3. The waning terms of network and cyberliteracy are essential forerunners of this thesis, and without them Web literacy would be minimized in both scope and importance. As explored earlier, technological literacy (largely interchangeable with digital) encompasses the Web and must therefore be understood first before any discussion of Web literacy can take place. The links between Web, information, and visual literacies have been well established by Faigley, Kress, and Williams, among many, many others. It should be clear, then, why an

understanding of related multiliteracies must be established to provide the framework from which to consider a new pedagogy of Web literacy.

But what of those critics of multiliteracies that would resist my efforts to reevaluate Web literacy, claiming that the scholarly conversation is too congested already with specialized literacy research? Is there any merit to keeping a diverse set of multiliteracies in the twenty-first century? How have others updated their approaches to multiliteracies? I would be hard pressed to continue my argument successfully without first addressing these questions to the reader's satisfaction, so it is to these issues that I now turn.

2.2 Overlap: a need to narrow the range?

Earlier in this chapter, I called upon Richard Selfe's observation of the imperceptible difference between digital and technological literacy. R. Selfe's motivation for erasing this distinction was for the sake of a simpler discussion and ease of interchangeability of terms. Because of the sheer number of multiliteracies in the conversation, some may be tempted, like Selfe, to reduce the conversation to a limited set of terms, as we tend to accumulate quite a few brands of literacy over the years.

Hording multiliteracies in the literature can lead to a lot of confusion and a sense that we need to "clean house," as some like Tyner would have us do. Tyner is a sharp critic on the subject of accommodating numerous variations of similar multiliteracies because she sees this diversity as the attempt to "prove the dominance of one multiliteracy over another" (93). Because doing so is distracting and counterproductive to our goals as teachers, Tyner believes we should be wary of scholars who exalt one brand of multiliteracy above the rest,

particularly because they may be trying to advance the interests of a specialized constituency of research (93).

Tyner is not alone in her critique. Kress believes we throw the term ‘literacy’ around without much consideration for its implications, and he believes it is to be reserved for a more restricted application. For Kress, “*literacy* is the term to use when we make messages using letters as the means for recording that message” (“Literacy” 23). Kress appears to resist the attempts of scholars to apply the term to a specialized application of learning (like the computer or the Web) because those applications overemphasize the production aspect of literacy—what we might refer to as *functional* literacy. But, according to Anne Wysocki and Johndon Johnson-Eilola even more inclusive definitions of literacy can be counterproductive. They see a misleading danger in our literacy wordplay. When we refer to literacy like we might refer to, say, over-the-counter medication—as something anyone can acquire without a prescription—we run the risk of jeopardizing our pedagogies by falsely assigning social agency to literacy. Furthermore, when literacy discussions fail to take into account the highly contextual nature that accompanies individual learning, we fuel a false hope that literacy represents some kind of magic pill that can cure the ills of society or the economy, and “only a lack of literacy keeps people poor or oppressed” (355).

Wysocki and Johnson-Eilola argue that literacy “gets put behind ‘technological’ or ‘computer’ because ‘literacy’ is already used to encompass everything we think worthy of our consideration: the term automatically upgrades the prefix” (360). Finally working toward a compromise, they propose to think of describing literacy “as not a skill but a process of situating and resituating representations in social spaces” (367). As I will discuss shortly, and

as I have discussed before, I am more apt to agree with this approach because it embraces a conceptually situated model of literacy instruction.

In opposition to Tyner, Wysocki, and Johnson-Eilola are scholars who would argue we need the highly diverse field of “tagged” literacies in order to accommodate the highly diverse environments our digital natives will encounter in the classroom and the workplace. Among them is Allan Martin, who acknowledges that while we may think it useful to reduce the field of multiliteracies into only a few or perhaps even one, thereby cutting down on duplication (or at the least, repetition), those that survive the cut “to speak with one voice for the ‘literacy of the information society’” will likely be voiced by “the powerful, the institutional and the wealthy” (18). Martin sees the effort to limit the theoretical discussion on multiliteracies to a small set of well-established terms in the literature as a way of protecting a powerful interest group. “Assimilating a ‘threatening’ literacy may be an effective defensive response to maintain the culture and identity of the group” (17). Ironically, Martin seems to use the same discourse as Tyner but to serve a diametrically opposing end.

It is not my goal in this discussion to mediate this divisive discourse at length, nor to come to a decisive resolution as arbiter; to do so would require an exploration of research far beyond the limits of this project. Instead, I would propose a compromise of sorts. Rather than attempting to rule out some multiliteracies in favor of others, we as a field could benefit from an alternative approach: looking at literacy as based in the conceptual context, rather than on tools or representations.

2.3 Conceptual literacy: rethinking the approach

Now that we have explored a few of the twenty-first century multiliteracies on which my approach to Web literacy relies, I will turn the reader's attention to a brief discussion of the conceptual literacies that will frame my new paradigm. Functional, critical, and rhetorical literacy, the basis for Selber's trifurcated model of conceptual computer literacy, will become the keystone of my updated Web literacy, which would not be possible without the groundwork laid by Selber in the related field of computer literacy.

By using computers as an example, Daniel Anderson argues we are not confined to approaching multiliteracies as tools alone:

[C]omputer literacy acts as entity and non-entity, a mediator that continually links converging technologies, concerns, and people. For educators, such a conception allows us to turn computer literacy from a thing into an activity, sloughing off definitions that would fix computer literacy as a set of skills in favor of processes through which multiple literacies can flow, processes like borrowing, mixing, layering, and sharing. (41)

Anderson goes on to emphasize the value of embracing literacy at more than one conceptual level, beginning with the functional. If we emphasize a model of interchangeability, we can "concentrate on things, to emphasize skills and emerging technologies. Our understanding of literacies, then, moves continually from concrete tools and skills to conceptual realizations and human goals like a finger tracing both sides of a mobius strip" (41). By focusing on more than just the things and skills, Anderson provides us with a conceptual discussion of the functional, necessary for a comprehensive understanding of any literacy based on tools or representations.

2.3.1 Functional literacy

Many of the definitions of multiliteracies outside of rhetoric and composition studies describe literacy at the functional level. These definitions resonate with people because they typically allude to the basic skills or knowledge needed to operate a tool, system, or artifact (such as the computer). This is the kind of literacy that employers and the public think of and come to expect, because these are the most easily identified skills required to get a competitive job. For example, an applicant might need to “know” Microsoft Office or be able to navigate an office email server with ease. Those outside our field, in turn, view it as the responsibility of teachers of rhetoric and composition to see to it that our students become literate at the functional level, thus helping them find competitive jobs upon graduation. To some, we serve an assembly line role, fitting our students with literacy like head gaskets on engine blocks. The machine will not function without this piece, and so we are expected to ensure that everything leaves the factory with all parts intact. This expectation may come from an antiquated view of the traditional role of English teachers with alphabetic literacy: teach our kids how to read and write, but do not teach them how to talk back. Build the machine, but do not change the prototype. Whether our definitions of functional literacy stem from an outdated perspective of alphabetic literacy or not, functional literacy remains an important subject for each of the multiliteracies discussed in this chapter, for how can we expect our students to become *critical* or *rhetorical* users of a technology if they cannot *use* it to begin with?

While functional literacy may be the popular view of those outside of academia, this conceptual level is often seen as inadequate to address the literacy needs of our students by itself. As a result, scholars are often compelled to displace a functional multiliteracy theory

with a more critical approach, as the former may focus solely on the technical details of the current tools in vogue (Selber 23). However, Selber sees the trouble that comes with a field that continuously revisits its own theories and definitions through displacement; as new ones emerge and are embraced, older ones seem outdated. They either fade from currency or are outright expelled from the discussion. The older theories, says Selber, are often “useful, if imperfect” (23). Letting go of these theories comes with a price, because “such a move does not change the fact that students must still learn effective ways to interact with computers and with those who are online. A better approach,” he argues, “would be more additive than substitutive: Students need both functional and critical literacies” (23-24).

2.3.2 Critical literacy

Anderson’s previous example focuses on critical computer literacy, a seemingly popular multiliteracy to approach in terms of the conceptual and one shared by scholars such as Selber and Barbara Blakely Duffelmeyer. As Duffelmeyer explains, “Critical literacy is an awareness of the forces that affect the micro- and macro-level conditions within which we acquire literacy and of how we view the uses and meaning of literacy” (“Topic” 290). The key to acquiring (and teaching) critical literacy appears to lie in examining the tools of composition production from a distance, from pausing to step away from the technology to consider the implications of its use. This distance not only allows for students to become proficient users but also promotes a heightened sense of awareness about the socio-cultural activity in which they are taking part.

Duffelmeyer compels her own students to recognize that

[a]pproaching a topic critically requires both being knowledgeable and continually seeking more information, having an inquiring attitude (a particular habit of mind by

which ideas are continually reevaluated), and developing habits of mind that permit the individual to construct, interpret, and analyze assertions. (“Critical Work” 362)

Duffelmeyer’s approach to critical literacy is echoed by the New London Group, who believe that “through critical framing, learners can gain the necessary personal and theoretical distance from what they have learned, constructively critique it, account for its cultural location, creatively extend and apply it, and eventually innovate on their own, within old communities and in new ones” (83). Both Duffelmeyer and the New London Group emphasize not the use of a technology but rather the reflective use of it, the critical awakening achieved by stepping away from the immersion in digital technology practices and recognizing how those practices are influenced by individual and cultural experiences. This makes the at/through distinction of immediacy and hypermediacy—that is, looking *through* an interface for the information represented within but also looking *at* the interface to evaluate how its mediation affects understanding (Bolter and Grusin)—an important part of separating functional literacy from critical literacy.

The at/through distinction is a key component of Duffelmeyer’s critical literacy research. “By looking at and through technology and by writing during this process” Duffelmeyer’s students “performed the kind of critical inquiry that leads to negotiated stances” (“Critical Work” 366). The at/through inquiry led her students to reconsider the enthusiasm for technology they had embraced since elementary school. Student comments about their experiences of becoming more critical about computers and technology led Duffelmeyer to conclude “how effectively the critical pedagogical approach brings the origins of a student’s attitudes to the surface and then posits alternative experiences as means by which students may attain greater agency” (“Critical Work” 368). With enough of an

understanding to separate functional literacy from critical literacy, we will be able to explore both in terms of Web literacy in Chapter 3. However, that still leaves the relatively undiscussed conceptual level of rhetorical literacy. For this, we will turn back to Selber for a brief overview and a conclusion for this chapter.

2.3.3 Rhetorical literacy

If functional literacy is a demonstration of the skills needed to use a technology, and critical literacy is a demonstrated awareness of how that use is influenced by social and cultural experiences, rhetorical literacy is the act of combining that awareness with functional skills in order to produce communications from a more informed perspective: action, first; reflection on the implications of that action, second; and approaching that action again with an informed, reflective perspective, third. The dimension of reflective action is sometimes covered under critical literacy, but rhetorical literacy offers more productive uses for our pedagogy, especially in composing environments like the Web.

Selber seems to be one of the few scholars in the conversation to address conceptual literacy at the rhetorical level. As he explains, many instructors have already used critical approaches to augment functional learning, but fewer have begun to embrace rhetorical literacy, which “insists upon praxis—the thoughtful integration of functional and critical abilities” to produce more reflective compositions for situated social and cultural electronic contexts (145).

Selber’s novel approach to this largely untouched third level of conceptual literacy centers on computer literacy, but because of his work I will show in Chapter 3 how it can be applied to Web literacy as well. Selber’s parameters include four components for a

rhetorically literate student: persuasion, deliberation, reflection, and social action (147). Echoing these parameters, Madeline Yonker observes that “[r]hetorical literacy involves users understanding both how, for instance, interface design is implicitly and explicitly persuasive, and how to design (compose) electronic texts with an eye for problem solving” (2). Both of their approaches to rhetorical literacy seem to focus on the technology’s interface, yet I see rhetorical Web literacy in terms of different parameters, as I will explain in section 3.2.

The comparatively little amount of scholarship on rhetorical literacy could be seen as a complication to this thesis for some, but I view it as an opportunity to pioneer new approaches to conceptually based multiliteracies. While my research concentrates on Web literacy, like Selber’s does with computer, I see an open window for other rhetoric and composition scholars to extend the conversation to other twenty-first century multiliteracies, including those not covered in this chapter. Our scholarship, and our pedagogy, will certainly benefit from the awareness that comes from reading the efforts of diverse and emerging research in our journals and at our conferences; it is my hope that my own contribution will help meet this demand in part.

After thoroughly exploring the multiliteracies that comprise Web literacy, and the conceptual levels by which we can address them, I turn to Chapter 3. I argue first for a return to Web literacy in rhetoric and composition scholarship, and then offer a revised approach to Web literacy in light of significant changes in the last decade. Finally, drawing on Selber’s trifurcated model of conceptual computer literacy, I present the revised parameters to reshape the Web literacy discourse for the next decade and into the twenty-first century.

CHAPTER 3: WEB LITERACY TODAY

This chapter begins with a justification of Web literacy studies, including a brief history of the Web as a composition environment, before introducing the rationale for revisiting our notions of Web literacy in light of the dramatic changes that have taken place online, particularly in the last five years, resulting in what we know as Web 2.0. I then move on to a tentative new approach that trifurcates Web literacy into three conceptual levels, loosely following the work of Stuart Selber with computer literacy as a guide without applying his same parameters. Within each conceptual level, I build upon previous scholarship to help me articulate a set of criteria to use for imagining functional, critical, and rhetorical Web literacy in the composition classroom. I conclude the chapter with a final note on what Web literacy means to the future of rhetoric and composition, and what the rhetorician's task is in this new Web environment.

3.1 Why Web literacy?

My colleagues in rhetoric and composition might question why we need to revisit our approach to Web literacy at all, or why we need one to begin with when *computer* literacy (and, by extension, *technological* or *digital* literacies) appears to cover many of the same goals and outcomes. I would respond by arguing that the Web, not the personal computer, has become the main platform for work (McClure, Day, and Palmquist 370). If this justification does not suffice, perhaps Richard Selfe's observation would augment it: "computers have become the main tools for writing and the Internet a major medium for disseminating writing" (138). Dissemination is key here in a world of 24-hour connections. Further, the difference between the Web and the Internet may explain the need to separate

Web from computer literacy. As John Barber explains, “[t]he Internet is, at base, a network of computer networks. The World Wide Web is a technology for viewing and sharing the content provided through the Internet” (114). Content is distinctly separate from connectivity, and our students recognize this as well. Digital natives live in a multitasking state of perpetual connectivity, if not at their computers then on their cell phones, many of which have instant messaging and Web-browsing capabilities, and student perspectives and behaviors can be an important aspect of shaping twenty-first century pedagogies. For further reinforcement of this reality, I draw upon noted virtual community enthusiast Howard Rheingold, who says that “education is happening now after school and on weekends and when the teacher is not looking, in the SMS messages, MySpace pages, blog posts, podcasts, videoblogs that technology-equipped digital natives exchange among themselves” (para. 1).

My response to opponents of further Web literacy research is to assert that composition practices, and the environments in which our students engage them, change over time. The progression of communication technologies in the past century is evidence of this: writers moved from pen and paper, to the typewriter, to the electronic typewriter, to the personal computer, to the World Wide Web. As each stage emerges as the preferred writing technology of its generation, composition instruction and practices react to the change but without losing the applicable features of the previous iteration. That is to say, personal computers were successful as a composition environment only because of their users’ familiarity with the QWERTY keyboard of a typewriter’s layout to which they had already become accustomed. And though several writing technologies have made the process easier, very few have made a revolutionary impression on society as a whole. “It is the networked computer, the spaces to which networked computers provide access, and the public ways in

which individuals are writing that are together changing the cultural landscape. These elements, taken together, are truly revolutionary” (WIDE “How Technology”). This observation, from the Writing in Digital Environments Research Center at Michigan State University, reinforces the notion that communication practices of the digital native generation have a greater influence on existing composition technologies than previous generations did with their own.

As composition practices change, so do their technologies of use, and so do our understandings of their required accompanying literacies. This is particularly true with the Web. To understand the need for an updated approach to Web literacy in the twenty-first century, it will first be helpful to briefly examine how our interactions with online writing environments have changed over the past decade and a half; to know where we should go, we need to know how we got here.

The World Wide Web existed before the turn of the century as a new information technology, layering visual and written elements together and linking them through hypertext in a wide network of connectivity. It was an amazing development to behold. However, the Web existed only by way of personal computers, and to most, as a read-only experience. Production was limited to those willing enough to learn the basics of HTML, and therefore the Web became a communication environment where composition was controlled by an elite few. Web literacy, then, was understood at a basic level as being able to read and access information through a browser. Moreover, because hypertext was still a relatively new concept in rhetoric and composition, and because it was the key to navigating from node to node in order to access new information, it became the emphasis of Web literacy pedagogy and research in the 1990s. Scholars traded publications that attempted to equip writing

instructors for teaching non-linear argumentation in hypertextual environments in the composition classroom (Bernstein; Carter; Norton, Segard, and Duin; Slatin; Snyder; Strasma). What distinguished previous hypertextual environments (e.g., like those found on an encyclopedic CD-ROM) from the Web was the use of HTML as the lingua franca of networked users.

Doug Brent offered HTML as the vehicle for democratizing information online. “As the easily-learned phonetic alphabet took writing out of the hands of the elite scribes and placed it in the hands of every educated person, so HTML is rapidly giving everyone the ability to be hypertext authors and hypertext publishers, not just hypertext readers” (“What’s Special”). While HTML may have presented the opportunity for everyone to become a hypertextual author, many Web users did not take to learning this new language; as a result, they remained passive readers only. Information as power still remained in the hands of a comparative few (though that few was growing), but the relationship between authors and readers was beginning to crack and blur.

The power structure of composition practices on the Web was dramatically changed with the introduction of WYSIWIG (What-You-See-Is-What-You-Get) Web editors, like Microsoft FrontPage, CyberStudio (later Adobe GoLive), or Macromedia Dreamweaver. These user-friendly software programs democratized production on the Web like their WYSIWIG cousins did before them on computers for word processing and desktop publishing. HTML lost its unique position as the powerful gateway to becoming an active Web composer, but this certainly did not ensure that the subsequent compositions were rhetorically sound or effectively designed. The Web was now open to millions of point-and-click authors who could—and did—publish whatever came to mind. When HTML coding

adjusted from being a serious obstacle for production to an effective tool for it, the definition of functional Web literacy had to change.

While the need to navigate hypertextual environments to access information did not diminish, more users were getting more familiar over time with the concepts of linking and organization. Hypertext was quickly going from novelty to norm, and literacy expectations of Web composition had to adjust to accommodate this shift. “Reading” the Web was and will always be a fundamental aspect of Web literacy, but now scholars had to account for a sharp increase in “writing” the Web as well, and some embraced traditional rhetorical approaches toward this end (Hunt). Additionally, principles of Web production in rhetoric and composition were borrowed from related fields like technical communication and graphic design (Coney and Steebouder; Farkas; Tapia). As the Web became a more integrated composition environment, research and scholarship of it in turn integrated academic work from supporting fields.

The paradigm shift in Web composing that occurred as more users went from readers to writers, and the adjustment to our understanding of Web literacy that came with it, was just one of the ways the Web was transforming at the turn of the century. Capturing the spirit of the dot-com boom of the late 1990s, Gurak reflected in 2000 on how the Internet had changed since its widespread introduction earlier in the decade. “More and more,” she lamented, “the Internet is being used to make money, gather our personal information, protect corporate intellectual property, and encourage us to shop” (10). Similarly, in 2000, Scott DeWitt described the Web as “a static medium. In many ways,” he argued, “it is television. One can talk back to the screen, but in the end, what’s there is there, quite distinct from the earlier dynamic conversation of the Internet” (115). In DeWitt’s view, the Web

commercialized the Internet and stripped it of its user-driven communication model, a place where people logged on for the purposes of connecting with other people. The landscape of the Web changed, as David Gauntlett notes, from the dot-com bubble era, when “the Web was full of idiotic capitalists who thought they could become millionaires just by having a website,” to when that bubble burst, bringing to a crashing halt the inflated era of ecommerce and one-way, read-only pages (3, 6).

When the bubble burst, it left many people wondering why they had bought into the hype of the Web in the first place, and how the future of online interaction would ever recover. As it turned out, the fire that burned so many investors was a cleansing one, like those that occur naturally in forests: overcrowding is harmful to progressive development, and every once in awhile there needs to be a radical clearing to allow for new growth. Ironically, this new growth is actually a return to the old forest. When Tim Berners-Lee created the World Wide Web in 1990-91 as a user-friendly interface to let people access the burgeoning information found on the Internet, he hoped that it would be built collaboratively, that Web users would “be involved in a two-way process, not only reading web pages, but also adding to and amending them, creating links and, of course, creating new pages” (Gauntlett 6). This Greco-democratic Web utopia—a two-lane information superhighway, if you will—may still be a long way off, existing in its purest form only in Berners-Lee’s best intentions, but we are now witnessing this re-growth of change for the Web: Web 2.0. In many respects, Web 2.0 is a return to Berners-Lee’s vision and it represents a progressive step backwards in the right direction. “The shift of the Internet from passive to active, from consumer- to participant-oriented, is what characterizes the transformed Internet” (McLester 19).

Though scholars disagree on a unified definition of Web 2.0, the term generally refers to the increased participatory nature of the Web today, particularly in the areas of collaboration, social networking, and information sharing. Web 2.0 gained traction as a neologism after being coined by Tim O'Reilly, founder of O'Reilly Media (a publishing company active in the area of computers and technology), at a conference called between his company and MediaLive International to discuss how the Web had changed following the collapse of the dot-com boom in 2001 (O'Reilly 1). The conference, which still meets every year and is known as the "Web 2.0 Summit," serves to educate business and industry on the latest evolutions of the Web. No such conference exists for scholars in our field yet, but that is likely to change as we focus more of our attention to the implications of our students interacting online in this way.

So, how does this new interaction change our relationship to technology? As McClure, Day, and Palmquist note,

[t]he main features of the Web 2.0 movement and Web 2.0 technologies, according to O'Reilly and others (Downes, 2005; Addison, 2006; Alexander, 2006; Thomas, 2006), include the use of the Web rather than the personal computer as the main platform for work. As such, Web 2.0 has shifted the focus from working locally to working in a networked setting, in which the Web is seen as a social, collaborative, and collective space. (370)

Web 2.0, then, marks the swing from the Web as an application to the Web as a platform, a new context for proliferating experimentation in production. Our students, digital natives that they are, certainly feel at home in this second generation of the Web, but as Stephanie Vie observes, "their comfort with technology does not imply, however, that they can understand and critique technology's societal effects. For them, technology is a means to an end; with it, they can find information rapidly and move on to tackle their next hurdle" (12). Our goal as

technologically informed instructors in rhetoric and composition should be to first help these digital natives bridge the gap from comfortable use with technology to uncomfortable awareness of the impact of that use. Then, in doing so, we can encourage them to use that uncomfortable awareness to employ a more rhetorical engagement with the technologies of today's Web, which in turn will benefit its users worldwide.

Many scholars have noted, like Vie, that while this generation of digital natives interacts naturally with and on the Web, they often fail to do so in meaningful ways. Rheingold, for one, notes that our students seem to naturally experiment with new technologies, but they frequently fail to apply these efforts in more socially conscious ways (para. 1). Similarly, Sara Kadjer argues that for the Web to act as a unique complement to writing instruction, it has to be contextualized within the classroom and taught from the rhetorical perspective. "Missing that step," she warns, "only leaves them to navigate the information superhighway without a map, a tank of gas, and a spare in the trunk" (49).

Contextualizing the Web's effectiveness in the classroom can be a difficult task, if only for its ever-expanding universe of information: if the Web was a large molecular cloud when it burst onto the scene, it is a colossal red giant now with no signs of going supernova anytime soon. Web 2.0 is a different kind of explosion, one of user-generated content as millions log on to share and exchange their lives on a level never seen before. "The new generation of Web 2.0 solutions are easier to use, more engaging and are making a larger impact upon collaboration and communication in the classroom than complex technologies of the past" (Yan 30). The impact of Web 2.0 on our students, on composition studies, and the accompanying need for a new approach to this literacy, is articulated by McClure, Day, and Palmquist, who earlier provided us with a working definition of Web 2.0. In a call-for-

proposals for an upcoming issue of *Computers and Composition*, they argue that beyond the shift that occurs from the personal computer to the Web as the primary platform for work:

[t]he focus of the Web 2.0 movement is on users, devices beyond the personal computer and uses beyond the individual workstation. These concepts would appear to have application in the teaching of composition due to the iterative, unfinished but always updatable nature of writing now evident on the Web and in software development, especially with regard to open-access materials and open-source environments. (370)

Web 2.0 information is organized differently, and this allows our students to take a more active role in shaping the way other users interact with new content. Additionally, access to this content is less restricted than ever before, due to open-source environments and the more collaborative esprit de corps among users today. In fairness, the “free-for-the-taking” spirit that exists in the attitudes of digital natives raises serious issues of copyright infringement, ownership, intellectual property, and plagiarism, to be sure. However, it also encourages positive composition practices; our students feel encouraged to sample content from other users—images, photos, audio and video clips, even source code—and remix it in new and meaningful ways. Open access changes the composition environment of the Web in dramatic ways, and this environment allows for a healthy alteration of how we think of texts in the twenty-first century.

Open access also changes the way a student makes meaning out of content. For instance, information is now often organized according to folksonomies. A portmanteau of ‘folk’ and ‘taxonomy,’ folksonomies are the emergent data that arise from the practice of applying user-defined tags to Web 2.0 content (Sinclair and Cardew-Hall 15). Tags are a metadata tool used to categorize content according to the user’s perspective, rather than the site’s administrator. For example, a picture of the Washington Monument on the popular

(and complicates) the social, rhetorical nature of Web 2.0, as meaning is made between author and audience without relying on expert classification systems. With the increasing shift toward user-defined content, it is now more important than ever that our students become critically aware of the rhetorical implications of the definitions they generate. Web 2.0 users generate more than definitions for content; they generate, remix, and compose content in ways that more closely resemble Tim Berners-Lee's vision for a two-way WWW.

3.2 Rethinking Web literacy

We can certainly see the value of Web literate users navigating and engaging the Web as its creator intended. Literacy is indeed more than the ability to simply read and observe; it requires composition, speaking back to the text itself. Web 2.0 enables this to a larger degree than ever before, to use the Web as it was meant to be used in the first place. It becomes crucial then to impart critical and rhetorical Web literacy to our students as complements to their functional instruction in the composition classroom. Fortunately, the move toward more critical approaches has already been addressed by Sorapure, Ingelsby, and Yatchisin.

The criteria that these three outlined in their 1998 article are effective for teaching our students to become more critical users of the Web primarily for research purposes—they saw their students turning to Web pages as sources for essays, and the unfiltered information that made it to many final drafts was a cause for concern. Sorapure, Ingelsby, and Yatchisin refocused Web literacy from the areas of navigating hypertextual environments and creating hypertextual arguments by calling for a new set of criteria for evaluating Web-based sources for their relevance, credibility and authority. The tendency of compositionists to transport print-based assessment criteria to the Web seemed inadequate to them, and their argument

was for a new definition of Web literacy that reflected evaluation criteria of a more digital nature (413). They stressed the need for students to be able to find resources online and then to question the effectiveness of these resources. Additionally, their pedagogical iteration of Web literacy focused on evaluation of specific genres for research purposes—namely, the e-commerce “infommercial” site and the personal home page—as well as evaluating the effective combinations of nontextual elements like images, links, and interactivity (414).

To be clear, I do not believe that we should throw out or wholly replace previously outlined criteria for literacy, such as Sorapure, Ingelsby, and Yatchisin’s; they are still a useful part of navigating the Web with awareness and should be taught in the composition classroom. However, in light of the radical changes the Web has undergone since the introduction of these criteria, we do need to supplement them in ways that reflect these changes. The Web is now used for more than research in the composition classroom, for example, and nontextual elements have advanced in dramatic ways since a decade ago. One way of updating our criteria is to expand the conceptual literacy dichotomy to include the third level of rhetorical literacy, wherein students become reflective practitioners of technology as well as informed questioners and efficient users.

To understand how a multiliteracy might be drawn out in terms of these three conceptual learning levels, we can begin by using the work of Selber in computer literacy studies. Selber offers a thorough treatment of stratified conceptual levels for computer literacy, breaking from the established literature to rearticulate *rhetorical* literacy as a distinction beyond the extent of *critical*. His work on the subject is original, insightful, and exceptionally useful to the subject of computer literacy. However, Selber also sees Web literacy as a subdivision of computer literacy, evidenced by his emphasis on online texts,

online environments, and online technologies as his examples for discussion. Because I view *Web* as a distinctly separate multiliteracy from *computer* literacy, I see an opportunity to extend his work on rhetorical literacy but in a clearly separate direction. Still, I am thankful for Selber's efforts to develop rhetorical computer literacy. The emphasis he places on the online learning needs of computer literacy are particularly focused in his discussion of the rhetorical level, and for this reason I choose to examine three levels of Web literacy instead of the traditional dualism of functional and critical literacy. Selber focuses intently on the rhetorical aspects of the Web to expand critical literacy into the rhetorical level, but his work reflected the Web as it emerged out of the dot-com bust at the turn of the century. As such, he did not yet have the chance to incorporate the aspects of Web 2.0 into his model that mark my own contribution to advancing the multiliteracy conversation. Similarly, as their article appeared before the turn of the century and the dot-com bust, Sorapure, Ingelsby, and Yatchisin could not have predicted the directions in which Web literacy might go. So, while I am certainly indebted to their pioneering work, I am also able to augment both by addressing rhetorical literacy in terms of the changed Web specifically, and not in terms of a computer literacy that absorbs Web literacy within its parameters.

Selber presents a set of extensive parameters to guide his discussion of computer literacy at each level, as shown in Table 2 below.

Table 2: Selber's parameters of three conceptual approaches to computer literacy

Functional (p. 45)	Critical (p. 96)	Rhetorical (p. 147)
Educational Goals	Design Cultures	Persuasion
Social Conventions	Use Contexts	Deliberation
Specialized Discourses	Institutional Forces	Reflection
Management Activities	Popular Representations	Social Action
Technological Impasses		

Selber explains all 13 parameters in detail, outlining the qualitative student outcomes he associates with each. An example of these outcomes can be seen in educational goals, Selber's first parameter for functional computer literacy, which requires that a functionally literate student learns to "situate mechanical skills in a pedagogical context, one that is consistent with a needs-driven approach to literacy according to which users invariably focus on what is important to them" (45). Each parameter is presented as a heuristic that allows students to approach each level of conceptual literacy from within a suggestive framework, rather than limiting their literacy development to a rigidly defined set of criteria that Selber calls an "algorithmic approach" (96).

My modification of Selber's heuristic parameters for my own revision of Web literacy operates on a more streamlined approach, owing to the limitations of the theoretical scaffolding I am building for my colleagues to stand on and build up. Whereas Selber outlines an array of parameters each for functional, critical, and rhetorical literacies, I employ just two heuristic parameters that apply to all three levels: content and identity. These are but two of the many parameters that we might use to rethink Web literacy; some may criticize my parameters for being too narrow or too few in number, especially when compared to Selber's. However, I believe that Web literacy, as I have redefined it earlier in this chapter, evolves at a much quicker rate than computer literacy; our current notions of computer literacy may be relevant for longer than our current notions of Web literacy. As such, my heuristic parameters act as the beginning steps toward a constant journey of updating Web literacy in the twenty-first century, and I will leave it to future research to expand and revisit the two parameters I will discuss over the next few pages.

In each subsequent discussion of conceptual literacy, I explore each level in detail before articulating how content and identity particularly apply in different ways to our students' Web literacy development. Earlier in this chapter, I discussed how content on the Web today is different from that of the past, and the notion of online identity is certainly not a radical concept in composition studies, having already been explored to some extent in the literature (Hunt; Kimme Hea; Vie; Warnick). Because Web 2.0 "exemplifies that digital content can be copied, moved, altered, remixed, and linked, based on the needs, interests, and abilities of users" (Alexander 151), content should become one of the first parameters guiding how we rethink Web literacy for the twenty-first century composition classroom. And, since "the World Wide Web, too, permits us to construct our identities in and through the sites that we create as well as those that we visit" (Bolter 17), we should also be concerned with how our students create and evaluate online identities as part of their increased social participation on the Web. With those parameters in mind, I begin with the first layer of our trifurcated model of conceptual Web literacy.

3.2.1 Functional Web literacy

"The hallmark of functional literacy as it has been traditionally mapped out in technology settings is a focus on highly specific, stabilized skill sets detached from particular social contexts" (Selber 33). Definitions of functional literacy like this one, Selber argues, have been derided as reducing literacy to the most basic level of operation. For this reason, functional literacy in technology settings has been pushed aside as either (1) an assumption that our students already possess it because young people are "in to" technology, or (2) as the responsibility of technical training courses, and not composition instructors. However, as

composition instructors in a digital age, we are on the frontier of our students' writing explorations—especially as more composition sections split their time between the classroom and the computer lab. That time in the computer lab can be an opportunity to enhance functional literacy skills on the Web that acknowledge social contexts; as our students navigate social networking sites, access frequently updated blogs, process streaming video, or construct intricate folksonomies, we can observe how they use these tools and skills to form relationships with digital content and how those relationships contribute to their developing online presences. This time in the lab may seem like a distraction from traditional writing instruction, but according to Kajder, composition teachers have a responsibility to foster functional development of digitally native students. Students

[n]eed to learn from us how to engage in online spaces and still have academic discourse, to do it for purposeful, functional needs, because the toolset can be completely different whenever they step into whatever their future jobs might be — and yet that is what the reality is right now. (5)

Composition instructors might be reluctant to accept this responsibility because they believe their students already know far more about using technology and interacting with the Web than they ever could. I would argue that this is a misconception of instructors who are hesitant to embrace new technologies in their classrooms out of fear, fear of losing credibility among their students or fear of the time commitment required to learn how to operate the new tools of Web 2.0. The technological gap in functional Web literacy between students and teachers has been described by Vie as “digital divide 2.0” (10). The first step in eliminating this fear and bridging this new divide is to understand how content is shaped by functionally Web literate students, and how we might help them shape it more effectively.

Functional Content. As discussed before, users who could functionally code HTML had long controlled content on the Web. To be sure, HTML—and the ability to manipulate it—has not disappeared today, but content comes in more flavors now, like microcontent. As Bryan Alexander explains:

Microcontent is simply small content—small in terms of size and contributor effort. Wikis, for example, are streams of collaborative writing, bits and segments of conversation, revision, amendment, and truncation. Blogs are about a series of posts each contained within a page, not entire pages themselves....Creating web content in either format does not require that the contributor build page layout, design menus, or develop a look and feel. (152)

The ability to create content without “developing a look and feel” may trouble traditional Web composers who place a great deal of emphasis on design, and I would agree; WYSIWYG editing cannot wholly replace total control of the composition process, nor should it. However, we cannot deny the influence that microcontent has had on a digital native’s composing practices, and how that influence has spilled over into the classroom. Therefore, our conception of functional Web literacy should acknowledge that while our students should be able to read hypertext, they should be able to “write” microcontent, and not be required to manipulate content via HTML to be considered functionally Web literate.

A key feature of microcontent, already discussed in this chapter, is the use of tagging for definitional purposes. Because tagging represents a way of ordering information, and because information literacy is an inextricable part of Web literacy, the ability to tag microcontent to fit within particular contexts should be a condition of functional Web literacy as we rethink it for the twenty-first century. If we want our students to interact with content, rather than simply process it in a passive way, they should be able to make order of the chaos sometimes present in folksonomies. Navigating content and microcontent—and

plotting that navigation in efficient ways—is an integral part of functional literacy. It can streamline the online experience for our students, allowing them to spend less time ordering information and more time re-purposing that content for the purposes of creating meaningful compositions on the Web. All of the time digital natives spend interacting with content can affect their online identities as well.

Functional Identity. The identity a student creates through her communication activities on the Web determines how other users will perceive her interests but it also determines the extent to which she will be accepted as a legitimate Web contributor within social contexts. A student who creates her identity by establishing credibility within social networks remixes the very parameter of credibility itself, which is a well-worn term in traditional Web literacy instruction. We teach our students to become careful assessors of a site’s credibility and trustworthiness, but sometimes do not fully consider how the active participation involved with such an assessment (commenting on a blog post, for example) might impact a student’s own online ethos and credibility as a Web citizen. Microcontent allows for more opportunities to reshape this identity, as compositions are briefer, more frequent, and often accomplished through the use of social networking.

Vie explores the issue of creating functional identities through the use of social networking sites, such as MySpace or Facebook. She argues that these sites “offer individuals the chance to create multimodal compositions to express themselves; they can use text, images, sound, and hypertext links to compose individual collages in their social networking personal profiles” (10). Self-expression is not an automatic process, despite the ease with which social networking enables it. Self-expression on the Web, the formation of an online identity, requires a student to understand how to aggregate multiple modalities and

literacies in order to establish her credibility as a participant in new composing environments. As Hunt observes, “the allure of the Web is based on how well both individuals and organizations use the technology as a means of establishing an online presence—an *ethos*—that conveys the sort of values they hold in common with the Web navigators they wish to attract to the site” (377). As a parameter of Web literacy in the twenty-first century, then, identity can help us conceive of functional literacy as being attached to, rather than detached from, particular social contexts, as Selber argues we should.

With this sense of how these two parameters might affect our understanding of functional Web literacy, we might think of the intended outcomes we desire our students to have at this level. Outcomes for a functionally Web literate student could include the following list, in which students can:

- Manipulate Web 2.0 composition tools (e.g., post a written/video blog entry, download an audio podcast, edit a wiki, apply tags to multimodal content)
- Navigate user-generated information environments (folksonomies) to find the information they need
- Create and develop extensively connected online presences that serve practical purposes, such as securing a job or internship through effective networking
- Construct mashups—creations that combine data and technology from multiple sources to serve a different purpose—for new content uses (what Yancey calls “envisionment”) (“Using Multiple Technologies” 39))
- Utilize and adjust open-source interfaces to create a Web experience that best suits their online goals

Clearly, these outcomes reflect only some of the functional needs of a Web literate student in the twenty-first century, and these do not include all of the outcomes already outlined in the literature up to this point (e.g., that a student should be able to perform a filtered search, determine the author of a site, or work with HTML). This list is not meant to be exhaustive; it should be treated as a starting point for composition instructors to think about new ways of approaching functional Web literacy in the present and near future. Composition instructors should take care when selecting Web 2.0 technologies for their conception of functional literacy; not every first-year composition course has the same stated outcomes, so using a set of one-size-fits-all criteria and outcomes would be an inappropriate application of this theoretical framework.

Of course, any attempt to rethink twenty-first century multiliteracies needs to address more than the functional skills of our students. We need to help them consider how those skills, and the online activities that result from their use, are contextualized in their individual experiences with the Web. We need to instill a sense of distance from the technology that allows them to think critically about the digital composition environments in which they spend so much of their time. With that in mind, I will turn to the second conceptual layer in my trifurcated model.

3.2.2 Critical Web literacy

Critical Web literacy is a complement to functional literacy. Rather than a counterapproach, critical Web literacy augments the operational skill set of functional literacy with a heightened awareness of the implications of those skills. Acknowledging this need for a layered, conceptual approach, Nicholas Burbules suggests that a crucial element of

developing critical Web literacy is to first become wholly familiar with the functional aspects of the Web, namely how pages are designed, presented and organized. “The more that one is aware of *how* this is done, the more one can be aware *that* it was done and that it *could* have been done otherwise” (118). Burbules argues that knowing the Web from the inside is the first step toward being able to know it from the outside—“to question, criticize, and imagine alternatives” (119). While his observations may provide more fodder for HTML advocates and opponents of microcontent, as they reflect the need to go beyond functional compositions, one thing all should agree upon is the requisite for multiple pathways to developing multiple dimensions of literacy, all of which are integrated as complementing, not isolating, approaches.

Bertram Bruce echoes the need for an approach to literacy that moves beyond the functional without leaving it behind, claiming that “as we modify practices, we reshape both ourselves and the new technologies. This means that talk about technology and its effects is hopelessly inadequate if it remains entirely in the realm of the technical” (224). Similarly, Gurak argues that we need more than just an understanding—however comprehensive it may be—of how to *use* the Web. “What we really need to understand,” about this new technology, she asserts, “is how to live with it, participate in it, and take control of it” (11). Gurak’s argument is mine here as well: critical Web literacy encourages our students to claim agency and ownership of the Web, which makes them active users instead of passive consumers. She also claims that we need a critical Web literacy because “unless people become familiar with the social, rhetorical, and political features of digital communication, they will be led into cyberspace with only a limited understanding of both the power and the problems of this technology” (11). I think Gurak strikes an important note here about the

power of the Web: students can readily observe how much it permits them to do, but they may not be as shrewd in observing the implications of that power, and what it means that only certain people can access it.

While power may enable our students as Web users to go beyond being more than just efficient users, they must complicate their usage by “critiquing, challenging, and anticipating how these technologies are designed, implemented, and used” (Gurak 11). Gurak’s point is well taken: while we should offer what assistance we can with the functional side of Web literacy, our strength as instructors may lie in guiding our students toward more critical relationships with the technology that occupies so much of their time.

Vie argues that critical literacy can be attained for the Web if we engage our students in their native composing environments, by focusing on the “technologies that students are familiar with but do not think critically about: online social networking sites, podcasts, audio mash-ups, blogs, and wikis” (10). These Web 2.0 features allow us to promote a critical literacy through the parameters of content and identity.

Critical Content. Burbules, exploring what a critical Web literacy meant toward the end of the twentieth century, argued that a primary component was the ability to assess credibility of content on the Web. Credibility extends beyond determining authorship of a single page or site; it extends “to responsibility for the particular links [the authors] create, where and how they create them, and the larger network of information sources to which they are related” (118). Burbules contends that for users to attain and practice this critical assessment, they need to stop engaging with the Web from a consumer orientation (the kind of orientation that marked Web 1.0 at the turn of the century) in order to “learn to distinguish

simple information from linked information, which implies a host of other assumptions and values” (118).

This emphasis on linking still holds relevance for critical Web literacy nearly a decade later. Web 2.0 content is defined in large part by its connections to other content. A user’s blog, for example, may link to relevant content several times throughout a single post, and if that user updates her blog frequently, a small collection of outgoing (and incoming) links emerges. Authors deliberately choose what content to link to and associate with, and this selection presents an opportunity for fostering critical Web literacy, as Bill Wolff explains. Two of the most important understandings students should have when confronting the World Wide Web, he says, are that “information on Web pages has implications by virtue of its placement on a particular site, and that our own political and social prejudices essentially define what is and what is not a reliable source” (Wolff 13). In other words, the content an author chooses to represent on his site *and* what content he chooses to associate his site with can both be used as jumping off points for our students to question the information available on the Web today.

Students should also become informed questioners of how that content is presented. While functional literacy may enable users to create Web compositions, these often rely heavily on microcontent and/or point-and-click publishing. Publishing a blog entry based on an existing, open-source template is a vastly different process than planning, designing, and publishing a site from scratch. I would argue that critical literacy can be developed when students are forced to factor in a wider array of considerations for creating, arranging, and presenting content. While democratizing the tools of production can lead to a more open Web that encourages composition from less technically inclined users, there is a danger of

complacency that exists as well. If we allow digital natives to passively accept content created from templates or WYSIWYGs as *the* form of content, we run the risk promoting the product over the process; in doing so, we might fail to inspire our students to pose critical questions about what is lost when Web compositions are reduced to stale, recycled open-source templates. “We are omitting from our pedagogy a system that encourages a new way of reading information and that engenders critical thinking and [composing]” (Wolff 1). We should encourage our students to examine how the composition process is affected by remixing existing content instead of creating originals, to further question what an “original” composition even means on the Web today, and how all of this complicates issues of ownership, authority, and copyright or “copyleft,” as the open-source model is called (Cummings 430).

For Burbules, critical Web literacy also includes “an apprehension of the *limits* of any organization of information. As large and inclusive as the Web is,” he argues, “it excludes certain important things to know or care about, and this will be true no matter how ‘World Wide’ the Web becomes” (119). I suspect that Burbules, writing in the late 1990s, did not anticipate the prolific growth the Web would experience in only a decade, and might I ask him to explain in more detail what these “important things” are and who determines them to be important.

A more accurate interpretation of Burbules’ comment on the limits of organization of information is that, subjectivity aside, important content to know or care about on the Web can easily be shoved to the wayside or buried under an avalanche of shallow distractions that sift to the top due to social filtering (users rate content on popularity through technologies like social bookmarking, and this content’s frequency of access multiplies in on itself *ad*

infinitum until it demands the attention of Web entry portals). Critical awareness of the limits of organization then becomes focused more on the nature of what is being brought to the fore on the entry portals of many digital natives' browsers (e.g., Google, Yahoo! or even Facebook) and what that means for the rest of the so-called useful content on the Web. This featured content can be difficult to look past, as Burbules continues:

It is a special skill to be able to imagine what is not or may not be there, to read the absences as well as the presences of information—in short, to *think differently*, to be able to stand outside the particular set of associations and assumptions that define the information space one occupies. (119)

Concentrating on what content is absent (on blogs or wikis, for example) instead of what is present—on the antimatter, if you will, of what surrounds the present—requires more effort of our students, and for that reason it does not come naturally with “surfing the Web.” A student can only see what is on the visible surface if she stays on her surfboard; if she gets off and submerges herself, if she explores the hidden unknowns of the deep, she can go from surfing to swimming, from functional to critical. This makes being aware of absent content an important cornerstone of critical Web literacy parameters, and one that should be emphasized as we rethink Web literacy at the critical level.

Critical Identity. As users interact with, remix, and define more content on the Web, their online presences expand and, in turn, help shape the way other users perceive their identities. Amy Kimme Hea has called this phenomenon an “edentity,” which arises from content interaction but also through “negotiation of cultural constructions of technology” (344). Because user profiles are far more comprehensive than before, often allowing visitors to see what a user has seen, our students have the opportunity to be critical of the Web practices of other users. This is especially helpful as a teaching tool in the area of

determining information's credibility and relevance; it is little wonder that our students often regard the only separation between Web author and Web authority as being three letters. Examining the *ethos* formed by a user through her tagging practices, for example, offers one way of bridging the parameters of content and identity at the critical level. By looking at the specific tags applied to microcontent like wiki pages or digital media files (photos, videos, podcasts), students can gain "potentially useful information about the way that others perceive these objects, questioning audience, literacy, and reception" (Alexander 153).

To illustrate this point of how content and identity can fuse to bolster critical literacy, take the following scenario for example: a student is browsing a photo set on Flickr, entitled "Action and Sports," for a writing project on the NCAA. He comes across a picture of two athletic men playing basketball in a park (see Figure 2). In considering how he might tag this photo himself, how he might make meaning from it, he browses the tags applied by the user who uploaded it and sees "basketball" and "men," confirming his own perceptions of this content and connecting his content-driven identity with another networked user. However, he also notices other tags, like "black person" and "ethnic," that strike him as irrelevant to the content at hand. This might prompt the student to enter into critical dialogue with the user to seek an explanation as to why he applied these tags. Was he trying to bolster his photo's search results? Why does he see the need to separate "men" from "black person," and what does this say about the perspective that guides the rest of his content interaction? More broadly, what does this say about the way content on the Web is shaped by bias, and how might I learn to recognize that bias? With luck, in the twenty-first century classroom mindful of Web literacy, this is where the student turns to his instructor for answers, and with more luck, this is where the instructor recognizes an opportunity for critical literacy development.



Figure 3: “Contesting the Shot,” from Flickr user J.J. Taylor’s photostream. Available: <http://flickr.com/photos/eaglewing/2551373594/in/photostream/>

Carefully inspecting the tag choices and folksonomy behaviors of other users can help our students become aware of the implications of reshaping content on the new Web. Participating in collaborative content practices on the Web—claiming agency for its development—is never done in isolation, even if a student is alone in her room. A networked student is actively socializing with other users, absorbing their microcontent and remixing it for her own composition purposes, which get remixed in turn by others. While raising questions about the online identities of users in social networks, knowing the content of one’s own Web presence can be a key step in fostering a critical awareness of identity. My own first-year composition students, for example, were shocked to learn what information returned on Google when they searched for themselves; I was shocked that they had never given any thought to their own search engine profiles. After evaluating their identities in the same way that a total stranger might, my students began to critically question the choices they made to highlight certain personal content while hiding other particular aspects.

So, through the parameters of content and identity, the following might begin to help us state specific outcomes for developing critical Web literacy for our students, and indeed

for modern users in the twenty-first century. Students, as users with critical awareness, should be think about:

- The tag choices assigned by authors in folksonomies
- The social filtering practices (e.g., “most read/emailed/Dugg/reposted/commented on” items of the day) and what that says of a discourse community’s cultural priorities
- The outgoing links that an author creates from her site
- The links the author *excluded*, whether on purpose or not

Like the functional outcomes presented in the previous section, these outcomes for critical literacy should be interpreted as a starting point; literacy acquisition is anything but static, so we should be prepared to modify our criteria for a literate student at any conceptual level.

The critical level of conceptual literacy is needed “now more than ever,” Douglas Kellner writes. We must always be critical “as we attempt to develop *new* teaching strategies and pedagogies, as we design new technologies and curricula” (211, emphasis original). This is certainly true, but we as instructors are not the only ones designing new technologies; our students are as well, and those technologies have a way of finding their way into the composition classroom. Because students are producers as well as consumers of Web content, it is vital that the critical awareness of the latter guides the informed practices of the former, expanding production beyond the functional. That can be achieved through the third level of conceptual Web literacy in my trifurcated model.

3.2.3 Rhetorical Web Literacy

Selber's approach to rhetorical computer literacy already heavily depends on the Web for its justification. It should require little faith from the reader, then, to accept my gentle redirection of his model in light of the justifications presented earlier in this chapter. We can begin addressing this third level of conceptual literacy by introducing a succinct overview of what it means to Selber himself. "Rhetorical literacy concerns the design and evaluation of online environments; thus students who are rhetorically literate can effect change in technological systems" (182). He argues that while students should be able to use technology (functional), and be able to question that use (critical), they can only have an impact as members of a socially conscious writing public if they combine that informed questioning with the use of technological tools to become "reflective producers of technology" (182).

Most literacy scholars seem to recognize *critical* as the enlightened conceptual level above *functional*. I believe Selber's approach better addresses the diverse needs of twenty-first century multiliteracies by teasing out the third level along the continuum of informed user, informed questioner, and reflective producer. This allows us to target our pedagogy at more specific outcomes, and relieves critical literacy of the burden of trying to address too much with one term.

Because of Selber's emphasis on reflective production, rhetorical Web literacy involves boosting the extension of functional use with the stepladder of critical distance. For Web literate students, functional gets them in, critical pulls them back, and rhetorical guides them through. This guidance specifically reflects the need for a literacy grounded in rhetorical principles, given the global nature of composing on the Web. As Samuels observes, "[t]he sheer fact that one can publish one's ideas to millions of *potential* readers

without a high level of technological knowledge or personal capital shows how the Web reworks the writer's view of audience, knowledge, discourse communities, and the act of composition" (9). Reflective producers, then, must be keenly aware of rhetorical considerations—like audience or Aristotle's traditional modes of persuasion, for example—in order to become effective Web composers. The Web, as Selber criticizes, "has quickly become a popular instruction site in which rhetoric as it has been traditionally mapped out both illuminates and fails to illuminate the process of creating online texts" (Selber 137). One could argue, drawing upon an earlier discussion in this chapter, that the gradual democratization of the production process has lulled many students into a state of "creation complacency," in which remixing becomes easier than producing from scratch. The ground-up composing process affords rhetoric a foot in the production door; recycling content may blind our students to the very existence of that foot, leaving them to hobble around the Web as rhetorically crippled composers.

Indeed, Samuels asserts that "many students who use...Web sites on a daily basis are never given the conceptual tools to reveal the hidden foundations of the rhetoric surrounding new media technologies" (148). My approach to rhetorical Web literacy seeks to redress this lack of conceptual tools for rhetorically Web literate composition students. For rhetorical Web literacy to successfully develop, students need to plunge back into to the technologies from which they distanced themselves at the critical level, as Melinda Turnley suggests:

Placing technology behind the scenes can decontextualize key aspects of web production and thus limit students' rhetorical agency. Students do not have to become HTML experts in order to create effective web pages, but a basic knowledge of HTML can enhance their practical and conceptual understanding of web-based documents. (133)

Therefore, an emphasis on guided technical instruction must be a key part of expanding Web literacy beyond the functional level, for “[o]nce equipped with the technical skills, hypertext authors can shift their attention toward effective (and more rhetorically appropriate) applications of the techniques” (Cripps “A Value”). However, we cannot let technological enthusiasm stampede us off the road of rhetorical theory and onto the high-tech track, because, as Carolyn Handa reminds us, “incorporating digital elements into writing—especially in the form of Web pages and multimedia projects— demands that we draw on our knowledge of rhetoric perhaps even more than our knowledge of HTML, design issues, or graphics software. Images and sounds are rhetorical” (2). An approach that balances technical know-how with rhetorical know-when, as it were, is necessary for developing rhetorical Web literacy. To embrace such an approach, we can begin again with content.

Rhetorical Content. At the level of microcontent, rhetorical literacy for today’s Web involves the intelligent use of tagging with a specific audience and purpose in mind, one that critically looks beyond the self-serving folksonomist. Web composers in the 1990s had the luxury of steering users to experience a site according to the author’s wishes. Not today. Users have more power, more choice, and the creations that acknowledge this will reflect the rhetorical savvy needed to distinguish one composition from the next on the Web. But while users have more choice in determining the content they absorb and label, producers need more freedom as well to create rhetorically savvy compositions, and this means going beyond the limitations of microcontent.

Functional literacy might mean using the Web and contributing microcontent in multiple, diverse social networks, but if students wish to add further dimensions to their Web literacy, they will be hard pressed to do so without equipping themselves to make

rhetorically independent compositions that exceed the limitations of microcontent editing tools or open-source templates. By helping our students become critical judges of the functional content they process while “surfing,” we can foster their desire to acquire the skills that empower truly rhetorical compositions on the Web. Thus, rhetorical literacy is difficult to conceive of without sophisticated Web composing capabilities, like a practical knowledge of coding languages, an appreciation for the principles of successful visual design, or an intimate understanding of organizing content according to deliberate rhetorical and ethical decisions.

Honeycutt and McGrane argue that information architecture can become an important rhetorical tool for students experimenting with site design, a type of composition that extends well beyond the scope of individual pages and certainly beyond the limits of microcontent. Because information architecture represents a deliberate structuring of how a user might navigate a site, the choices a designer makes—to link a particular node to another in a particular way, or to highlight certain paths for the user over others—are inherently rhetorical ones, though not in the traditional Aristotelian sense (90). Most student productions in the composition classroom do not approach this level of complexity and/or extent, as those are typically reserved for advanced composition courses in technical communication or Web design. Furthermore, because they are a shared space with frequent updates from multiple participants, microcontent environments rarely allow users to rearrange the higher-level organization of their sites. Despite these hurdles, information architecture is a relevant aspect of rhetorical Web literacy because it draws heavily upon traditional rhetoric for making considerations of audience, style, and delivery, as well as the modes of persuasion—*ethos*, *logos*, and *pathos*—that we emphasize in the composition

classroom. Honeycutt and McGrane posit Web compositions as being heuristically grounded in a rhetoric that does not rely on traditional notions of persuasion, but rather in “a system of for making decisions about the construction of digital artifacts while at the same time helping users make their own information decisions” (102).

Thus, rhetorically Web literate students situate their composition’s content, and their own identities, according to critically informed ethical design choices. Students who accomplish this demonstrate their abilities to become *reflective* producers on the Web, a key distinction that separates them from functional literacy alone. I observed firsthand the need for imparting this rhetorical dimension of Web literacy in my own first-year composition classroom in the spring of 2008. As part of their end-of-semester e-portfolios, my students undertook a modified version of Patricia Ventura’s “The Essay and the Websay,” published in *Kairos* in 2002. The assignment, in short, asks students to repurpose their documented research essays for the Web. Given the brief amount of time I had to execute the assignment—around three weeks—I chose to forego spending class periods teaching my students HTML, though I provided ample resources for those willing to learn it on their own. Instead, because my class’s facility for writing on the Web was limited mostly to microcontent editors and social networking profiles, I prompted them to use Googlepages, a very simple WYSIWYG Web editor developed by the same company that provides the search engine starting point for many students’ research. We spent the first week getting familiar with the interface, discussing the elements that comprise an effective Webtext (like visual design, organization, and audience), and critiquing a host of example sites and pages. My students showed remarkable aptitude for deconstructing other users’ compositions on the Web: they searched for other contributions a particular author had made and pointed out how

his practices demonstrated clear biases (critical identity), and they also observed how the content he chose to leave out might cloud how we perceive his argument (critical content). However, this aptitude did not carry over to their own productions.

Googlepages made composing Web pages very accessible for my students. More or less, if they could use Microsoft Word, they could use this program as well. But what the WYSIWYG editor bestowed in convenience, it withheld in flexibility: students could only choose from a limited number of design layouts, templates, and visual elements. As a result, many of their compositions ended up as slightly recycled versions of the same formula. Their arguments were very different, to be sure, but the opportunity for rhetorical production that reflected the critical learning they gained in the first week was lost. Functional literacy alone ruled the day, and my high hopes for shrewdly repurposed Web compositions were dashed—save for two students.

These two students alone (out of 51) chose to avoid using Googlepages, opting instead to code their own sites from scratch using a medley of programming languages and savvy visual rhetoric to produce truly impressive compositions. They emailed me almost constantly seeking advice, not for the technical aspects of their design (which they had mastered), but for the continued rhetorical focus of tailoring their argument to a more specific audience through their sites' overall *ethos* and accessible user navigation. I helped them make ethical decisions to govern the presentation of their arguments, decisions that factored in both the intended audience for their texts and the inescapable nature of their responsibility as global members of the writing public. They controlled the content to a degree that far surpassed my own technical acumen, but needed my help to shape their rhetorical identities.

Rhetorical Identity. “The performance of identity is obviously always a social phenomenon,” observes Bronwyn Williams (27). My students demonstrated this social interaction by drawing me into their identity-making processes, and I became an agent in the formation of their identities as members of the global writing public. Rhetorically Web literate students deliberately create their identities as the result of shaping an online *ethos* with the critical awareness that every piece of content produced, edited, or remixed will reflect back on oneself as a participant on the social Web.

Rhetorically Web literate students recognize that identity is a two-way endeavor. Done correctly, the choices that students make during the design process will almost guarantee that their compositions will elicit feedback from the community to which they expose them. This feedback, in turn, should prompt students to respond to criticism and compliment alike, shaping their rhetorical identities in the arguments they build for their responses. Take, for example, a student who creates a blog to compose her thoughts on the semester’s assigned readings in a first-year composition course. Given the somber nature of many of the readings, she decides that picking from the limited number of available blog templates would impart an inappropriate rhetorical tone for her comments, so she searches a number of respected blog networks to find a suitable template. She stumbles upon one, copies the source code, alters significant portions of it and creates her own CSS to govern the design in a way that fits her needs. As a sign of respect for the original author’s efforts, she retains the creation credit, embedded in her code. The author, a rhetorically literate user himself, executes an advanced Google search for any pages related to his online identity, and discovers the student’s blog, which has been significantly overhauled, much to his delight. He comments on her fourth blog post, thanking her for retaining credit and praising her

redesign choices to reflect the nature of her readings. Identities have been blended, adapted, and remixed through the reflective production of content.

The most successful composers on the Web—be they bloggers, Wikipedia editors, members of YouTube or any other new media sharing community—are the ones who can aggregate information from all over the Web and combine it in meaningful ways for particular audiences. These savvy users demonstrate the principles of rhetoric that we have upheld as scholars and preached as instructors for years, principles like audience, author, message, and *kairos*. These, when successfully combined with rhetorical appeals, articulately define a user's online presence.

Through the parameters of content and identity, rhetorical Web literacy can help rid us of the vapid metaphor of “surfing the Web” that has been associated for years with going online. Surfing implies a shallow Web experience, one that lets users pass over content without getting off the board to explore the depths of the content's context: where it originated, why it matters, what it means, what it leaves out, and what we can do to change it in dynamic ways. “Swimming the Web” might be more effective in conveying the deeper nature of critical Web literacy, then, as it could imply a more active role on the user's part in the “taking on the responsibility for ideas and for action both as a producer of texts and as a reader,” or what Diana George and Diane Shoos argue as “the one skill most necessary for a critical literacy in a postmodern age” (125). In light of the need for a conceptual approach that extends beyond the binary of functional and critical, (and without trying to overextend the oceanographic metaphor) I think we can safely say that George and Shoos' assertion applies to rhetorical as well.

With rhetorical Web literacy being a progressive combination of both functional and critical literacies, we might be tempted to create an exhaustive list of desirable outcomes that supersedes all others. I will not forward this agenda, observing instead that a rhetorically Web literate student would also be able to meet any stated outcome we put forth as criteria for a functionally or critically Web literate students as well. Instead, I will offer the following brief list as a starting point for discussion. At the level of rhetorical Web literacy, students should be able to:

- Create and distribute their own open-source template designs for use with microcontent (e.g., blogs or social networking sites), which requires a knowledge of coding languages like HTML
- Recognize that rhetorically savvy templates are a form of composition that democratize access to content on the Web for other users
- Share their reflectively produced compositions with a global audience, asserting their identities not only as students but also as members of the social writing public
- Sift through the endless haystacks of content online to find specific needles of interest for a targeted audience, and aggregate those relevant needles through the use of Web 2.0 information streams to establish an identity of trust among any given social network

It goes without saying that this list is not definitive; our outcomes obviously need to adjust to keep pace with changes in composition practices, new adaptations of classical rhetorical theory, and any subsequent iterations of Web literacy that emerge through our collective research. To move beyond a limited discussion of the implications of stated

outcomes, I will now bring this chapter to a close with a brief reflection on what all of this reimagining means.

3.3 Making sense of it all: a final note

The parameters, guidelines, and outcomes I put forth in the previous sections are by no means exhaustive, nor are they the final word on the matter. I introduced them into the discourse for the purposes of refining our notions of Web literacy in this decade and in the next, a need I successfully articulated at the beginning of this chapter. I fully expect that my colleagues, after carefully evaluating the rationale for my refinement, will suggest ways in which my parameters for conceptual Web literacy could be expanded or challenged. I am not seeking to establish an ironclad authority over Web literacy at the functional, critical, and rhetorical levels, but rather to call attention to our need to work toward a new way of thinking about Web literacy pedagogy *as a collaborative effort in our field*, reflective of the more participatory nature of the Web itself. Let mine be the first steps, then, on the trail toward a new approach in the twenty-first century classroom, where we constantly revisit the ways in which we train the next generation of up-and-coming rhetoricians to succeed in this new Web environment.

The rhetorician's task on the Web today is difficult to pin down yet plain to see a need for. With an infinitely expanding universe of information to sift through, it is easy to get lost in space, as it were. The depths of the Web can become black holes, drawing in all of our time and energy while outputting nothing but cosmic dust in return. The task of rhetoricians is to bring order to this chaos, for themselves (certainly) but also for the other Web explorers they encounter in orbit. They need, in Richard Lanham's terms, to use "fluff" to bring people

to “stuff” in an economy of attention (5). This rhetorical ordering most often is a collaborative effort, an international space station of networked Web literate students. They need to be savvy users and electronic rhetoricians who can bring collective order to the chaos by mastering content through shrewdly crafted online presences. Their identities can connect with others crafted in the same rhetorical fashions to shape and reshape content in new and productive ways, to claim agency in the evolution of the Web as it passes through the atmospheres of Web 1.0, 2.0, and beyond.

The era, or perhaps just the novelty, of Web 1.0 ecommerce has passed, and Web users are reaching out to re-explore the limits of going online. No prognosticator can foretell the direction those limits will be pushed, but one thing we do know for certain: Web literate users that go beyond the functional—to critically question and rhetorically reshape online spaces—will help shape the next iteration of the Web as we know it, so it is absolutely essential that we acknowledge the role we can play as instructors of rhetoric and composition in shaping the shapers. Williams suggests that, as instructors, “rhetoricians need to teach ways of building arguments with technology that reflect this newly emerging digital literacy” on the Web (“Part 2” 124). It is to this role as teachers of Web literacy that I now turn.

CHAPTER 4: WEB LITERACY IN THE CLASSROOM

I spent the previous chapters building my case for revisiting Web literacy today and for the future; all of that research would be squandered if I did not consider how the theoretical considerations actually might affect the practice of teaching students in our composition classrooms. After all, when we speak of Web literacy—or digital, or information, or visual, or fill-in-the-blank literacy—we speak in terms of how it can be developed for our students. This chapter channels the energies of my argument into situating our pedagogies to best serve the composition needs of digital natives in the twenty-first century. I suggest ways that instructors could implement Web literacy activities based on the multi-conceptual model I presented in Chapter 3. Drawing from similar calls for new approaches to multiliteracy instruction, I imagine a tentative set of best practices to which we might adhere when bringing Web literacy into the classroom, taking several dimensions of the education process into consideration.

4.1 Toward a model of best practices for Web literacy instruction

4.1.1 Assessment and the writing public

Many scholars have noted that for us to construct successful twenty-first century multiliteracy pedagogies, we cannot rely on a simple transfer of the methods we employ with a print-based classroom (Penrod; Sorapure; Turnley; Yancey “Looking for Sources”). The round peg of print, no matter how well-used, does not fit in the digital square hole. Kellner remarks that our postmodern pedagogy cannot be focused on print culture, like modern pedagogy was; instead, we need to recognize the need to develop multiple literacies for the

purposes of “critically analyzing, dissecting, and engaging a multiplicity of cultural forms” resulting from new technologies in the digital world (209).

This pressing need to give our pedagogical attention to multiple literacies is accompanied by a more complicated need to adapt our teaching models for new digital composition practices in the twenty-first century. One of the unique dimensions of this adaptation is assessment, which here can mean the ways we respond to student texts or the ways we evaluate them. Assessing the Web work of digital natives can be a tricky venture for many reasons. To begin with, the term ‘digital native’ is a bit of a misleading misnomer. It implies that students have grown up using the digital technologies that surround them, but this is certainly not the case for every member of this generation. Many of our students come to us with serious technological deficiencies as the result of any number of causes, from uneven funding across school districts to socioeconomic factors at home, or even because of a lack of interest. Indeed, these technologically underprivileged students are at a disadvantage for reasons beyond the obvious. Teachers may wrongly assume that, because they are from the ‘digital native’ group, they automatically must possess advanced proficiency with the tools that give their generation its label. Therefore, our assessment of Web literacy compositions at *every conceptual level* must focus on the demonstrated abilities of the individual, not the assumed capabilities of the entire homogenous group.

Teachers need to get to know their “students and their technological attitudes, abilities, and their expectations for technology-rich instruction” (R. Selfe 156). Instructors should make every effort to recognize each student’s conceptual relationship to Web literacy and offer highly contextualized feedback (assessment) to help address his or her particular needs (NCTE “Writing Assessment”). A one-size-fits-all approach to Web literacy

pedagogy is a woeful mistreatment of our students' needs, and a poor reflection on our own understanding of rhetorical education. This extends to a broader level as well: Web literacy pedagogy should be locally shaped and developed, sensitive to the particular needs of a particular group of students, in a particular course, at a particular college or university. As the NCTE argues, there is no assessment that fits "in all environments for all purposes, and the best assessment for any group of students must be locally determined and may well be locally designed" ("Writing Assessment"). Shirking a more convenient 'template teaching' approach requires extra discipline, but it is worth it in the end, as the rewards that come from facilitating multiple dimensions of student-centered Web literacy pedagogy should outweigh the added effort required to produce it.

And while we assess the outcome of the composition process—the product—our students need to be able to critically assess the technological activities that led up to that outcome (R. Selfe 158). On the assessment of assignments that employ and demand the use of new technologies, Diane Penrod argues that "all too often the evaluation still centers on the product even though the measurement addresses students' process," and that a number of negative outcomes result from focusing assessment primarily on the product (131). She states those outcomes as:

- The finished product does not function in the ways a student expects
- Students have no clear idea why their electronic text fails to communicate effectively
- Inauthentic assessment is created by instructors only assessing the product
- A full range of electronic writing is rarely included in the assessment (131-32)

These negative outcomes might be taken as a warning not to stress product-centered instruction, such as an overemphasis on designing (which could fall under the functional or rhetorical categories). The student should get more out of the assignment than something to show off; she should take with her a critical awareness of the production process that she can apply toward future compositions as well.

Some writing scholars (Penrod; Yancey) have declared that we have entered into a post-process epoch for composition studies. The process-centered approach in composition, argues Yancey, still “embodies the narrow and the singular in its emphasis on a primary and single human relationship: the writer in relation to the teacher” (“Made Not Only” 309). In light of my own framework for Web literacy, I would agree with her. Texts in the composition classroom are increasingly being made for a much wider audience than peers or teachers; they are made for a worldwide audience, a Web audience, a social audience. And while I will not attempt to reframe the entire field of composition studies to reflect this post-process approach, I do think it is relevant to the discussion of Web literacy pedagogy in this chapter. Yancey is quick to point out that she does not believe the process model is flawed or counterproductive, as it encourages students to get to know each other and themselves as writers and editors alike through multiple circulations (or revisions) of drafts. However, she argues for a new model of composing that takes the circulation out of the classroom and into the global community, one that helps our students “develop as members of the writing public” (311). The writing public of the new Web participates in what Joseph Moxley calls “datagogies,” or online writing communities which might deal specifically with microcontent. As he explains,

[r]ather than being theorized by experts, vetted by the peer-review process, and published after a long wait, datagogies are pedagogies that are subject to immediate revision, collaboration, and even deletion. Via the datagogy, users—other teachers and students—can develop pedagogical practices in real time. (183)

Moxley's neologism invites us to shift the emphasis of composition instruction to more interactive, less autocratically controlled communities that encourage students to claim more worldwide agency for their writing practices.

Thus, Web literacy pedagogy should emphasize that students are not confined to writing for the limited audiences of their teacher and their peers; instead, they are members of the writing public, composing socially and not in isolation. Clearly, this may terrify some introverted students or those who lack confidence in their own writing skills. Both types of students frequently appear in first-year composition classrooms, praying to get through the semester with a decent grade and without letting anyone else see their texts. But, if part of our responsibility as teachers in the digital age is to prepare our students to successfully compose in the shifting environments they might encounter in their careers or even in college, we cannot lure them into a false sense of security when it comes to their writing practices. That is not to say that we should force our students to publish on the Web on the first day of class—to throw them into the deep end before testing the waters, as it were. They need to build, gradually but steadily, their comfort level and identity as members of the writing public, and we can help accomplish this by sequencing our activities to develop functional literacy *before* critical and rhetorical literacies.

4.1.2 Hesitation and tension

Bringing functional literacy into the classroom may feel like teaching a correspondence course on home VCR repair. “We are not technicians,” instructors might

argue. Additionally, as Selber admits, “[t]eachers who are responsible for helping students become rhetorically literate might feel nervous about this prospect,” but “the key for teachers is to be flexible in their perspectives on literacy” (182). To be sure, literacy flexibility is an absolute must for instructors using twenty-first century technologies in their classrooms. Part of that flexibility is to realize that, while in the classroom, students will look to us to provide answers when they get stuck; while we may feel more comfortable when this involves the traditional analysis of an assigned reading, we must also accede to our varying roles with technology as part leaders, part learners, and part technorhetoricians.

Indeed, “[t]eaching software is technical training that may meet immediate needs, but it does not expand students' intellectual capacity” (WIDE “How We Should”). Here, the Writing In Digital Environments Research Center Collective (WIDE) acknowledges the need for functional literacy to allow our students to operate in the digital writing environments of the Web. Functional literacy may seem inferior to rhetorical literacy, but both are needed for a more effective pedagogy. After all, it is difficult to become a critical questioner and an informed producer of a technology if one cannot even use it in the first place. Or, as Turnley eloquently observes, “[t]o analyze and respond carefully to web environments, students need practical experience with web technologies—they need to get their hands dirty with all aspects of the web composing process” (133). But use of the Web is the entry point of a journey that lasts well past our reach as instructors. WIDE therefore goes on to say “we see our task as helping students acquire the intellectual and critical capacities they need to critique and choose among available options and to acquire new knowledge for themselves as tools develop and evolve.” This last point about teaching students to teach themselves when to recognize the need for new tools is a crucial one for a model of Web literacy that extends

beyond the composition classroom and into our students' academic, professional, and personal lives. It also reflects the need for our new literacy pedagogies to remain, first and foremost, student-centered, a need which Richard Selfe hones in on. Selfe claims that if composition teachers have any hope of succeeding with multiliteracies in the classroom, "they need to keep their general priorities as humanists straight: focusing first on the literacy needs and talents that students exhibit and the collective talents that teachers, administrators, and staff members can bring to bear on instructional problems" (13). Concentrating on the human aspects of technology-based literacy development, he argues, is the only way to keep our pedagogical bearings as we widen our teaching spectrums to include new tools for composition in the ever-changing landscape of communication.

However, in our devotion to imagining new ways of approaching student-centered literacy through technology, we cannot overlook a necessary corollary: the need to address our own twenty-first century multiliteracies as instructors. Asking students to use new technologies to produce new compositions will come off as a hollow request if we do not possess some level of acumen ourselves; though we do not have to be as proficient as our students, we lose substantial credibility if we cannot demonstrate our own familiarity with technology. To enrich our curricula with new composing tools requires us to devote extra time to learning them, and time is a resource we are notorious for having little of. If teachers are to attempt this enrichment, they need to know that their extra efforts are valued by their students, their departments, and their institutions. In short, composition instructors need proper cultures of support to encourage new explorations of technology in the classroom; this support can come in various ways, through active communication among faculty members, multiple opportunities for professional development within departments, or increased

funding from a university's budget (R. Selfe 8). Without adequate backing, teachers will find little return on their time investment, and may give up on learning new technologies altogether.

This obstacle may in turn serve to further widen the “new digital divide,” or what Vie calls the learning curve gap that separates us from digital natives when it comes to technology (10). Allowing this gap to widen because we have no time or no desire to learn anything new is an obvious impediment to implementing the updated pedagogy of Web literacy for which I am advocating; how can we expect to execute rhetorical literacy projects, like redesigning open-source template code, if we do not know the first thing about HTML? To be sure, composition instructors are very adept at infusing critical perspectives into their lesson plans, and most of us can easily become efficient, functional consumers of microcontent like our students. However, unless a composition teacher has some professional design experience outside the classroom, or teaches courses in technical communication/Web design, she will face tremendous difficulties while trying to fully implement rhetorical Web literacy in her curriculum.

She may be tempted to avoid that step altogether, banking on the winds of change to clean Web compositions out of the classroom. Perhaps she does not want to spend her time learning a new piece of design software only to see it discontinued in favor of another. Indeed, scholars have noted that effective twenty-first century pedagogies should rely on contextualizing the technologies of production without leaning too heavily on any one innovation, given their tendency to evolve and disappear at equally rapid rates (R. Selfe; Turnley; Yancey). At the same time, however, new technologies of production are essential for intersecting our students' writing practices in and out of the classroom. As Vie argues,

“[c]ompositionists should focus on incorporating into their pedagogy technologies that students are familiar with but do not think critically about: online social networking sites, podcasts, audio mash-ups, blogs, and wikis” (Vie 10). To do so, however, requires that we familiarize ourselves with these technologies. We need to be able to relate to our students’ frustrations and discover ways of circumventing obstacles together. Building this familiarity provides us with a critical understanding of the nature of digitally composing on the Web, and aligns with the arguments of Duffelmeyer and Ellertson, who

urge composition instructors to welcome these multimodal forms of composing text, not as trivial, chaotic, meaningless, plebian, MTV-like assaults of sensory material that we can ignore and go back to our "business" of teaching folks to read and write like we were taught to read and write. Our business has changed because our information environment has changed, and we fulfill the professional imperative we all believe in when we persuade students of the importance of—and give them ways of—pushing past the appearance of transparency in text. (para. 39)

When businesses undergo dramatic changes, personnel are expected to adapt or begin to update their résumés. Now, to be clear, I am not arguing that composition instructors should sign up for a Facebook profile just to avoid a pink slip; such is not the environment of higher education (especially among those who have earned tenure). However, in order to keep rhetoric and composition relevant in the eyes of our students, our universities, and even ourselves, we need to acknowledge the influence of the seemingly mundane composing practices of the digital natives we serve, and re-imagine ways of absorbing these into our pedagogies. As rhetoric and composition teachers, we are in a unique position to “trigger changes in the way the world communicates, thinks, and interacts” (Penrod xxx)—especially online—and this position demands that we remain open to the rapidly changing needs of a global community, comprising untold numbers of the social writing public.

While most teachers would probably agree with the attempts to make our students more conscious of their role as social writers, some compositionists may shun the learning and teaching of new composition technologies to achieve this end. There are certainly those instructors who might see composition pedagogy differently in that our primary responsibility should be to teach traditional writing skills in order to prepare students for the formal writing assignments they are likely to encounter in other courses and in their careers. Those who hold to this view may not see any value to be gained from including informal genres of communication, like blogs, wikis, social networking sites or other forms of microcontent, especially when their inclusion comes at the expense of a major writing assignment (e.g., rhetorical analysis, summary essay, or argumentative research paper). This tension between traditional writing instruction and the need to remain current with communication technologies raises an interesting question about our profession and our field: what happens to our identities as composition instructors when the focus of our teaching splinters away from teaching the traditional academic essay to embrace emerging composition tools for our assignments? One could depict this tension as existing between old guard versus freshly minted teachers, as conservative versus progressive ideologies, or as simply as Luddite versus technophile, but as long as diverse and opposing perspectives exist within our field and within our departments, a certain feeling of curricular jaggedness will unfold. Our students are sure to pick up on these discrepancies from personal experience, urging each other by word of mouth to sign up for or stay away from Dr. So-and-So's comp class because "you get to or have to make Web pages instead of writing another paper."

The traditional Dr. So-and-Sos in the field may have a good point: our composition courses are typically only 15 or 16 weeks long, and with so many other writing outcomes to

meet, how can we possibly make room for Web assignments without cutting another valuable writing unit? I will certainly agree that we should not wholly replace our composition syllabi with nothing but Web literacy activities, or even technologically-based assignments in general. To swing the curricular pendulum too far away from formal academic writing could very well deprive our students of the basic communication skills they need to succeed in college and the workplace. It is a difficult issue, to be sure, and as I am still only emerging as an instructor, I am afraid I cannot offer a definitive solution. Nonetheless, I do believe each teacher in our field can create a balanced composition course that integrates *some* measure of Web literacy alongside more traditional assignments without sacrificing stated student outcomes. To do so, however, requires that instructors not look at the ideas presented in this thesis as a complete package that must be (or can be) transplanted into their classrooms in its entirety. Effective Web literacy pedagogy requires each of us to make rhetorical decisions to include some aspects (like critical evaluation of folksonomies, for example) while excluding others (e.g., hand-coding argumentative Webtexts) from our own individual syllabi, based on the changing contextual needs of our instruction and based on localized decisions about the level of Web technology with which we are comfortable.

So, to close this section, I would once again assert that, given the right learning environments, Web literacy pedagogy can help our composition students assert their identities as members of the writing public, and it can benefit their other forms of communication as well. To do so, we must show our students that, just as their own compositions are not done in isolation, Web literacy is not an unconnected part of the composition classroom.

4.1.3 Implementation and invention

Any attempt to bring Web literacy into the classroom should be connected to broader curricular goals of the course, the curriculum, and higher education, and this connection should be made explicitly clear to our students (Sorapure 2). However, as discussed earlier, not every first-year composition course can accommodate Web literacy, and instructors need to decide for themselves—and with their writing program administrators—whether a curriculum that includes instruction in this area is appropriate to meet the goals of the course and curriculum. I for one have been fortunate enough to have a dedicated culture of support at Iowa State that embraces diverse approaches to composition pedagogy, thanks to ISUComm, our innovative communication-across-the-curriculum initiative.

ISUComm encourages communication instructors at all levels (including first-year composition) to expand their assignments to address more than written compositions alone; we as teachers have considerable support to place an “emphasis on oral, visual, and electronic skills development as well” (“About ISUComm” para. 1). At the heart of this emphasis on teaching more than just writing is the WOVE pedagogy, a multimodal approach which stands for Written, Oral, Visual, and Electronic communication. WOVE stresses the need to recognize that written communication has become necessarily tied to other modes as well, for undergraduates and professionals in the working world (e.g., a written report is delivered orally, accompanied by an aesthetically stimulating presentation slideshow which might be simulcast live or uploaded later to the Web). Furthermore, ISUComm and WOVE acknowledges that many of these combined forms of compositions that our students produce are done on the Web (para. 3). ISUComm uses WOVE to justify a first-year composition curriculum that implements multimodal assignments that challenge our students to think of

communicating in the changed, diverse writing environments of the twenty-first century. As a further justification, and one that aligns neatly with my own justifications for Web literacy, ISUComm argues that “if we are to adequately prepare our students for the challenges they will face in the academy and beyond, then it is our responsibility as teachers to acquaint them with communication practices as they actually exist” (para. 3).

It should be clear to the reader, then, how my own experience as an instructor for ISUComm has enabled me to even consider Web literacy as an augmentation to composition pedagogy. I have opportunities to use the Web for exploring progressive new ways to improve my students’ multimodal communication, as evidenced by my Webtext assignment discussion in Chapter 3, but not all first-year instructors enjoy the same advantages I do. My first-year composition courses may be very different from those in other departments at universities around the country, with different curricular goals and different pedagogical visions. Therefore, because my ideas come out of a contemporary, richly sustained culture of support, and because this allows me to teach with more diverse electronic resources (like Web composing) than other instructors might have, readers should be mindful of their own curricula and support before attempting to implement new Web literacy activities in their first-year composition courses.

Instructors who enjoy my same kind of curricular experimentation and support may even choose to extend the pedagogy offered in this thesis into more sophisticated areas of Web design. Depending on the level of curricular flexibility teachers have with their first-year composition courses, they might even consider introducing the principles of cascading style sheets (CSS) and other Web standards that go beyond HTML, like XML (extensible markup language). These would afford rhetorically Web literate students even greater control

over how their content is styled and managed. CSS, for example, allows users to separate content from style while organizing all style-related page information into a single document. Additionally, XML allows users to define their own element tags when coding Web pages (and other information systems). This flexibility reflects the increased user agency of folksonomies—as discussed in Chapter 3—and provides students with the opportunity to carefully consider the implications of their own choices. This added level of content management could also open up new opportunities to extend Web literacy into issues like single-source publishing and complex information architecture.

While these Web standards may seem like radical topics to include in a first-year composition course, a few instructors at Iowa State have successfully incorporated CSS instruction into their honors sections with encouraging results. This would not have been possible without the support of ISUComm, which recognizes that teaching such diverse electronic compositions can help students develop their communication skills in other modes and areas as well. Of course, some writing program administrators and/or department heads may not be so enthusiastic about instructors who devote this kind of semester time to teaching CSS, XML, or other Web standards, given the already compressed schedule of many composition courses. Thus, as I stated before, Web literacy pedagogy must be tailored to fit the varying contexts of individual courses, of a teacher's familiarity with the technologies available, and to the needs of each student and group of students. Composition instructors should work with their course supervisors to decide on an appropriate level of Web literacy in the first-year classroom, a level that helps meet the department's curricular goals, which can vary widely from college to college.

In addition to widely varied departmental goals, another problem we face in matching these goals to our revised Web literacy, as noted earlier, is that our field is just beginning to address pedagogy in terms of the new Web. We suffer from a drought of published assignments or activities that embrace this new composing environment adequately. To slake our thirst, what follows are a few related ideas for classroom activities that might reflect a refined Web literacy pedagogy. Each can help develop a different dimension of Web literacy for our digitally native students in its own way and on multiple conceptual levels. Based on my experience as a composition instructor, these activities would appeal greatly to students; “there is something transformative about teaching writing in networked space,” writes Penrod, “...[it] recasts the writing process into something alive and genuine for students” (1). I have observed with almost 100 percent accuracy that activities which invite students to do something other than stare at the blinking cursor of their word processing program tend to be successfully embraced, in and out of the composition classroom.

It should be noted that the following activities are only suggestions; I have not applied them in my own first-year composition classroom, so I have no data to prove their effectiveness. However, because “the Web allows for exploring diverse forms of literacy practices emphasized in many educational institutions” (Gruber “Using” 465), and because “[t]eachers must have the room to experiment with literacy in relationship to the needs of their students, and then to reflect on the practice” (Tyner 67), these activities may help us put theory into practice while concurrently engaging the composition interest of our students. This, after all, should be one of our most desirable goals as effective educators in the twenty-first century. Toward that end, we might try implementing the following:

- Rhetorically analyze a user's profile on a social networking site, such as MySpace, Facebook, or Friendster, to evaluate the implications of content and identity that he chose to represent. Afterwards, do the same to your own profile to observe how you might alter your *ethos* in light of your findings: even after all of your changes, how does the predetermined profile template limit your ability to differentiate yourself from other users? Attempt to take control of the design template's content to shape your identity in a more meaningful way.
- In groups, locate an active folksonomist by her username and profile. Conduct a thorough investigation of how that user has shaped content on the Web in various networked contexts (e.g., Wikipedia pages he might have authored, edited or debated; YouTube videos he commented on, uploaded, and viewed; tags he applied to multimedia; blog posts he composed or commented on). Once a comprehensive picture is formed of the user's content-shaping practices, present the group's findings on how that content defines his online *ethos* to other users and what sorts of consequences might arise from having an *ethos* like his in a socially networked world.
- Early in the semester, long before the research essay project, find a Wikipedia page related to a research topic you might choose. Observe multiple perspectives presented in the discourse on the "Discussion" page, where Wikipedians make their argument for why certain content should be omitted/included/worded in a specific way. Track the opinions of a particular side and view all of the edits their members have made throughout the pages of Wikipedia. Based on this information, create a profile on a

social networking site for one of these users (change the name, of course), shaping it by making assumptions about personality, character, etc. Over time, exchange profiles with “similar” users and observe the targeted invitations the student receives to join particular groups. Write the research paper. In a blog entry, reflect on how assuming someone else’s unfamiliar online identity changes your perspective on the topic, your information-gathering practices, and your own relationship to online content.

I would argue that each of these activities enhances a different dimension of Web literacy, but all of them reflect “a critical pedagogy that urges the acquisition of a set of skills and an appreciation of multiple points of view that permit students to become aware of the cultural and personal lenses through which they, and others, view the world” (Duffelmeyer “Critical Work” 369-370). Our teaching practices for the twenty-first century need to allow for experimentation while ensuring that they are grounded in this critical pedagogy.

This call for experimentation is made resoundingly by Vie, who urges rhetoric and composition instructors to participate in online social networking sites in order to understand the composing environments our students engage in outside of class. Familiarizing ourselves with Web 2.0 tools, Vie argues, can help us “assist students in strengthening their technological literacy” (20). “Reframing literacy,” she argues, “in light of participatory spaces like social networking sites will be key to harnessing the potential of these sites for composition pedagogies appropriate for the 21st century” (21). Vie is joined more broadly by Danielle DeVoss et al., who argue that composition instructors must prepare themselves to approach multiliteracies in new pedagogical ways, to be sure, but also “to modify current

curricula to account for students who spend as much time reading the texts of coded simulations or visual arguments as they do the pages of novels” (183).

While the “[l]anguage, criteria, and ideas are ported from paper to pixel even though one technology calls the other into question,” (Penrod xix), this realignment does not mean we must start over from scratch and throw out six decades of research on the teaching of writing. Our models of assessment, for example, may not carry over verbatim from the printed essay to the Web composition. Certain elements—like setting reasonable timelines, scaffolding assignments throughout the semester, or providing multiple tiers of feedback—are still very much relevant to effective pedagogy and should be retained as basic principles of classroom instruction. In any event, the task we face at hand, as twenty-first century composition instructors, is to adjust our pedagogies for recognizing Web compositions as inherently digital, while at the same time employing proven methods of instruction for carrying out assignments in the classroom.

4.1.4 Best practices assembled

To accomplish this task, I present a collection of principles to guide the assessment, implementation, and invention of Web literacy activities as part of a composition curriculum with an emphasis on digital writing environments. The CCCC Position Statement on Teaching, Learning, and Assessing Writing in Digital Environments explicitly endorses the assumptions of this type of course, and their last three assumptions line up remarkably well with the three stages of conceptual literacy outlined in Chapter 3. The CCCC document recommends that courses “(c) include much hands-on use of technologies; (d) engage students in the critical evaluation of information; and (e) prepare students to be reflective

practitioners” (para. 6). It is somewhat comforting to know that my approach to reimagining Web literacy pedagogy would appear to be endorsed by the largest professional conference in our field.

So, as a summary of (1) the varied expert contributions related to this discussion (including some I did not expound on) and (2) my own opinions on the matter, the following list represents what we might think of in terms of “best practices for Web literacy.” Like every other set of criteria presented in this thesis, this list is by no means exhaustive, permanent, or definitive, but it does present a needed step in the constant revisions to our notions of the continuing relationship between composition studies and twenty-first century multiliteracies.

Instructors Should:

- Experiment with the same composition tools their students use on the new Web—blogs, wikis, podcasts, mash-ups, social networking sites, folksonomies, etc.—in order to establish common ground between us (Vie)
- Provide students with a schedule of deadlines to meet for complex projects (Glenn and Goldthwaite 97)
- Sequence assignments to progress in individual stages and to build from one to the next throughout the semester (R. Selfe 157)
- Rely on student expertise with technical applications to execute Web literacy activities and to augment peer-to-peer technological mentoring
- Network with other innovative teachers within the discipline and professionals outside of academia to troubleshoot any technical issues that arise (R. Selfe 162)

Assessment Should:

- Be tailored contextually to address the unique and individual needs of the student, the assignment, and the course (NCTE “Writing Assessment”; Sorapure 3)
- Reflect the nature of the writing environment: if the assignment is digital, the bulk of the grading should apply to it, not the written paper assigned to accompany it (Yancey “New Assessment” 90)
- Remain flexible to deal with the impossible-to-anticipate unknowns of teaching with technology and teaching on the Web (Beason 36)

Students Should

- Be encouraged to view their everyday social Web activities as opportunities to produce compositions for the course
- Take risks with their texts without fear of being judged solely on their technical expertise
- Be reminded constantly that they are social members of the writing public (Yancey “Made Not Only” 311)
- Rely on a diverse network of technical support, including their peers, their teachers, and the global writing public to overcome the obstacles that prevent them from composing on the Web (Reid 199)

Activities Should Be:

- Rooted in a rhetoric that is technological, social, and cultural
- Linked to a thoughtful, critical consciousness of technology

- Framed by learning how to learn (WIDE “How We Should,” originally credited to Michael Joyce)
- Anchored by multimodal approaches to writing (WIDE “How We Should”)
- Connected to “everything else in the course, from the assignments themselves to the readings, the class activities, and the software we use” (Sorapure 2)
- Contextualized as “authentic” compositions that extend beyond the walls of the classroom or the desk of the instructor (Wysocki 4)

By creating this list, I realize that it reflects the nature of composing on the Web today: remix, sampling, mash-up content and a confluence of diverse identities. I hope that instructors in the field can derive practical pedagogical value from these best practices, to be sure, but I also hope that the spirit of participatory collaboration that marks the social Web (and the creation of this list) is not lost on them either. As I stated before, rhetoric and composition instructors are busy enough without devoting *our* personal lives to learning new technologies that our students embrace in *their* free time; teaching with technology takes a sacrifice on our part to address their digital needs of today and tomorrow. I hope that I have demonstrated how, like Web content, our pedagogical approaches can be freely sampled, remixed, mashed up, repurposed and combined in exciting new ways without building instructional methodologies from scratch. The same shift in the Web that compels me to rethink our approach to Web literacy should be echoed in the ways we rethink composition and multiliteracy pedagogies for the twenty-first century.

In sum, rethinking Web literacy, as I did in Chapter 3, may be easier to do in theory than in practice; the transition from suggestion to real-world classroom instruction may prove

a tremendous challenge for us indeed. Andrea Lunsford captures this difficulty quite well in her keynote address to the 2005 Computers and Writing Conference, remarking that “[r]edefining terms is one thing; realizing and fully implementing any such redefinitions is quite another” (176). Nonetheless, this should not deter us from attempting to infuse our pedagogies with new theories, new approaches, or new suggestions, however radical they may appear at first.

CHAPTER 5: CONCLUSION AND IMPLICATIONS

What I have presented in this research is the theoretical framework to approach Web literacy in light of related multiliteracies, conceptual literacies, and the user-driven, social participatory nature that marks the next iteration of how users interact with the Web. I attempted to lay out the beginnings of a set of informed best practices for Web literacy instruction, and I discussed ways that we as innovative teachers can keep technological pace with our students to keep our cutting edge from rusting. While I acknowledge that this research could easily be extended farther into book-length scholarship, I would rather see this new approach expand in new directions with the assistance of my colleagues in rhetoric and composition research. They can offer new and diverse perspectives on the topics I have addressed and challenge the merits of my emerging theory. Indeed, my own academic future will be inextricably linked to multiliteracy pedagogy and the Web, and I look forward to joining my colleagues as we delve into new areas of specialization within both.

5.1 Suggestions for further research

As the field of rhetoric and composition continues to acknowledge how Web 2.0 can change our students' composing habits, further opportunities for meaningful Web literacy research will appear. What follows is a description of three research projects that extend the theoretical groundwork I have laid out in the previous chapters. Given enough time, I would engage these projects on my own, but to do so would contradict the collaborative nature of Web literacy for which I have extensively advocated. It would also deny the future of Web literacy studies the crucial diverse perspectives of other scholars that a successful theory depends on for survival; it was never my intention to turn twenty-first century Web literacy

into a one-man show, so I look forward to seeing the scholarly response in the literature over the next few years.

5.1.1 Web literacy survey of FYC students

A valuable part of adopting a newly updated pedagogy would be to first understand just how Web literate our students are to begin with. This theory makes a number of assumptions that Web literacy can be taught at various conceptual levels, but because no two students enter our classrooms with the same faculty and experience with technology, a certain level of rhetorical awareness is necessary for developing these levels in a diverse classroom. Ideally, we could measure their levels of Web literacy like a doctor measures a patient's cholesterol: run a test, diagnose, and recommend the best medicine. Unfortunately, multiliteracies are not as biological as cholesterol or blood pressure, but we can still turn to research methodologies to give us a better idea of our students' "literacy health and wellbeing."

The first suggestion for further research applies my theoretical framework to a quantitative methodology that seeks to answer a number of questions about the capabilities of our students when we first encounter their writing at the college level, in the first-year composition course. FYC instructors frequently use diagnostic essays in the first few days of the semester to get a sense of where students are in their writing development and what areas in particular they need to work on. The same principle could apply for gauging multiliteracy development through the implementation of a comprehensive Web literacy survey.

This survey should be designed to determine the skills and awareness our students come to college with, and should be drawn out in terms of functional, critical, and rhetorical

Web literacy as articulated in Chapter 3. If the survey consisted of 30-40 questions, for example, then 10-13 of those could deal with functional, 10-13 with critical, and 10-13 with rhetorical. The survey could be furthered sub-categorized by arranging questions within each section according to the parameters of content and identity.

With an accurate read on our students' abilities, we could refine the best practices outlined in Chapter 4 and even our definitions proposed in Chapter 3 to better match the needs of our target audience. From the outset, though, we can anticipate an obvious objection to the usefulness of such a study: FYC students are not the same from school to school or even state to state. Demographics would likely show that students from wealthier backgrounds have more faculty with the Web than students from lower income families or school districts, if for no other reason than access to technology. Technology literacy standards, which are more readily defined in K-12 curricula than Web literacy standards, vary considerably from district to district. In a perfect world, this survey would be administered to *all* incoming freshmen nationwide, and the broader results could be used to refine pedagogical guidelines on a localized level. However, our students are as diverse as the opinions of literacy that govern their education, and so a more limited, contextualized approach would be prudent in reacting to any data gathered from this survey. At the local level, university writing programs might consider implementing this type of survey at the beginning of each school year; over time, a clearer picture of their own students would emerge, and this data could be compared with other studies at other schools.

In addition to assessing our students as they first come into college, it would also be helpful to know how their future professors and employers judge the importance of Web literacy, and what specific outcomes they would deem necessary. Adding this element to the

Web literacy survey might help us shape our pedagogy for more targeted outcomes based approaches, but it also might unfairly focus our literacy efforts to serve particular interest groups, a practice Tyner has so vehemently warned against. Clearly, care should be taken in choosing interview subjects in order to provide a balanced perspective of disciplines and careers.

It appears that this research project would be no small task, but at the same time we can easily see how it would be one worth undertaking for the benefit of scholars in our field and students in our classroom. But understanding Web literacy at the university level involves several dimensions of research, and it is to these other dimensions that I now turn.

5.1.2 Survey and analysis of recent Web literacy teaching activities

While the previous research study would give us a sense of how Web literate our students are to begin with, another study could determine how that literacy is improved upon in their composition courses. Scholars conducting this type of research might seek to answer a number of questions, like how Web literacy is being taught in composition classrooms at the university level, as represented in scholarship shared through more emergent literature from the Web 2.0 era. Does it reflect the impact of Web 2.0, or is Web literacy still modeled after the turn-of-the-century Web? Are Web literacy skills being taught in accordance with the recent calls of rhetoric and composition scholars concerned with multiliteracies, like those I articulated in Chapter 2? To answer these questions and others, a researcher could design a study to examine how rhetoric and composition instructors integrate Web literacy curricular innovations in their courses. A survey element could be incorporated that invites a significant number of teachers from around the country to elaborate on their methods, to

identify the most influential literature that informs their pedagogy, and to provide examples of their teaching materials for comparison and analysis. To complement the survey, this study could also canvass a wide range of the major publications that have included teaching experiences with Web 2.0, although this dimension may have to be delayed until more Web literacy activities (like the ones I suggested in Chapter 4) are published.

To be fair, this would not be an easy or quick project to see through to fruition. A number of obstacles might prevent significant progress. Some instructors, for instance regard their curricular innovations as intellectual property and may be hesitant to freely share them with their colleagues. Without a compelling response to the survey, scholars may be hard pressed to accept such a research project as representative of our field. The details of each assignment (e.g., an assignment sheet, rubric or syllabus) are rarely presented fully in the literature or even as appendices, as authors often prefer instead to focus on their experience with the activities in the classroom. Additionally, consistency in the presented format of each assignment or activity varies widely from journal to journal, author to author and book to book, making it difficult to quickly identify and evaluate each assignment or activity in turn. Finally, as noted in Chapter 3, the literature on the impact of Web 2.0 in the composition classroom is still emerging, and it may be difficult to assemble a compelling collection of publications that highlight our field's changing pedagogy in this area.

While these obstacles may make this project complicated, they are not insurmountable, and it is my sincere hope to read about the results of one of my colleague's efforts in the near future. Of course, allowing for the publication process to cycle through, the "near future" may not be until well into the next decade. Then again, this research may already be underway: the CFP went out last year for a special issue of *Computers and*

Composition entitled “Composition in the Freeware Age: Assessing the Impact and Value of the Web 2.0 Movement for the Teaching of Writing.” The questions the issue seeks to address are especially relevant to my own theoretical approach, and to the quantitative research projects I have articulated in this section. Research challenges posed by the authors include the following:

How should we define Web 2.0 thinking in the context of composition, and how has it influenced the development of Web 2.0 applications?

How are Web 2.0 applications being used as educational tools in composition and to what effect? How can they be improved in the future?

How do our uses of Web 2.0 applications fit or not fit within existing institutional and educational structures (e.g. technology and curriculum planning), and how might our uses change those structures? (McClure, Day, and Palmquist 370)

I am confident that the answers to these questions will serve to refocus some of our energies toward addressing the native digital composing environments of our students.

5.1.3 “Multiliteracies” database

While we await the findings of the special issue on Web 2.0, we can add another dimension to updating our pedagogical approach by making successfully proven teaching materials available to all who teach composition courses across the country. Sharing our experiences in journals is a slow process, as observed in Chapter 3, because of the rigorous standards that preserve the authoritative nature of the respected journals in our fields. Additionally, conferences, while more participatory and interactive than journals, are financially prohibitive to many scholars. Therefore, would we not be doing a service to the tireless educators—inexperienced and seasoned alike—that take in our digital natives by providing them with instant access to the collective knowledge of the innovators in our field?

Furthermore, would this increased access not be a terrific example of the necessary ‘cultures of support’ for integrating technologically-rich pedagogies that I argued for in Chapter 4?

A technology initiative like this one was suggested in a grant proposal by University of California Irvine called “Shared Pedagogical Initiative, a Database of Educational Resources for the UC Community,” or SPIDER for short. This initiative sought to “expand and enhance successful, local, collaboratively developed, web-based instructional materials for students in lower-division, general education courses, and to develop corresponding web-based faculty enrichment programs for their instructors” (Samuels 34). Its creators endeavored to make teaching materials—assignment content, coursework templates, syllabi, etc.—freely available to “all faculty inside and outside of the university” (34). The grant was not funded, the database was not built, and teaching materials were not made available to instructors across the country, to the surprising delight of Robert Samuels, who has written extensively about the relationship between technological curricula and academic labor.

Samuels is sharply critical of initiatives like these that seek to democratize teaching materials. To him, they represent burning and often-overlooked questions of intellectual property rights, as well as what he perceives as a threat to tenure-track faculty teaching positions. Making these materials available to anyone, he argues, prompts university officials to staff writing courses with instructors trained outside of composition: if they run into trouble in the classroom, they have all of the resources they need online. “Institutional grants that call for the improvement of undergraduate writing instruction without the improvement of composition employment status could work to undermine the discipline of composition,” he warns (36). Do we really devalue the accomplishments of innovative teachers and published scholars by putting instructional materials on the Web for free in a centralized

location? Will this action shake the very foundations of the tenure promotion process?

Perhaps, but in not doing so, it also strips the untenured professors and graduate assistants in the trenches of an invaluable resource for improving their pedagogical approaches.

Apparently, we can observe an important lesson about collaborative pedagogy in the field of rhetoric and composition: while many researchers are excited to share their arguments, theories, definitions of and classroom experience with new literacies, fewer are equally excited to freely provide their colleagues with the materials necessary to implement or duplicate their own classroom successes if it means risking professional advancement. As Samuels points out, “the desire to share intellectual property and place all materials on the Web may act to further undermine the professional expertise and status of many faculty working in the field of composition” (170). Sadly, Samuels may be right, and it may also be due to a tenure system that prizes individual accomplishment—journal articles, books, conference presentations, and teaching awards—over open collaboration. Still, Samuels’ depressing observation may be one we are forced to accept in our field—or academia on a larger scale—unless we can find some way to measurably test the success of collaborating with other teachers on assignments and unit materials.

Though SPIDER was unfunded, all is not without hope. A concerted, collaborative effort to prepare new teachers in computers and writing has been implemented with some success in Australia. The project, dubbed “LitKit,” assembles in one resource bank a collection of relevant websites and materials for fostering information and technological literacies in the classroom. Its proprietors claim more success than other similar databases because of the “ongoing sense of ownership” its users claim of the project (Rossiter and Bagdon 86). The administrators of LitKit assert that many databases fail to serve useful

pedagogical purposes over time because its users are passive: teachers scroll down in search of something that interests them, and because of the closed model of administration enacted by the owners of the site, information can only be ordered in a specific way. If that hierarchy does not reveal anything of interest to visiting teachers, they will likely move on in a seemingly endless search for pedagogical resources of a more practical nature.

To my knowledge, no effective repository exists in the U.S. of assignment sheets, syllabi and rubrics for instructors wanting to implement Web literacy assignments in their own courses. For a time, CompPile.org attempted to maintain a user-generated collection of instructional materials, but these were not targeted for Web literacy, and no users were contributing their original materials. The WAC Clearinghouse Teaching Exchange is a more successful depot of teaching materials—relevant articles, syllabi, formal writing assignments, lesson plans, class activities, and faculty tip sheets—that equip instructors across the disciplines with a writer’s pedagogical tool chest for better student learning. Although the Clearinghouse is to be applauded for its aims and execution of them, it still does nothing to address the specific pedagogical needs of teachers looking to focus on Web literacy. Therefore, while new and continued research is certainly necessary to move toward a more cohesive theoretical approach to Web literacy, and while we can share this research at conferences and in journals, the everyday praxis cannot be ignored or left as a foregone assumption. The field of rhetoric and composition would greatly benefit from a centralized database of course materials for Web literacy assignments, collected from instructors across the country and across the disciplines, updated frequently by the members themselves, and organized in an accessible and meaningful way. Such an initiative could:

- qualify as a graduate student’s master’s thesis or creative component;

- be publicized in the heavyweight journals of our field (*CCC, Computers and Composition, College English, Pedagogy, Journal of Teaching Writing, Writing Across the Curriculum*, etc.);
- be updated and maintained by a volunteer consortium of graduate students from several different institutions, or housed permanently in one department and overseen by a rotating consortium of administrators;
- save countless hours of individual research by instructors looking for new ways of technologizing their classrooms;
- create new opportunities for research-based classroom approaches;
- benefit the digitally illiterate instructors who feel they need more resources to keep up with the digital natives entering their first-year composition classrooms

While this database would initially begin to foster Web literacy instruction in light of the Web 2.0 parameters I outlined in Chapter 3, it could easily be expanded to include the related multiliteracies that comprise Web literacy (as articulated in Chapter 2). This multiliteracy database should reflect the practices of a rhetorically Web literate field. Its users should assign tags to organize teaching materials and content, and attribute ownership to the teaching community as a whole while retaining authorship credit for the user who contributed it, like channels on YouTube. By reshaping the established notions of ownership in the database, we could keep it fresh, democratized, and most importantly, a relevant professional development resource for teachers at all stages of their career.

These three suggestions for further action in the area of Web literacy are but three of many possibilities, and I look forward to monitoring their progress as my research interests

bend toward this specialization. I similarly look forward to taking up the future research challenges of my colleagues as they turn their attention more toward how the Web is reshaping composition practices and instruction. My rhetoric on this last point has been consistent and assertive throughout this project, and I am aware that it may draw sharp criticism from the diverse opinions of my readers. From suggestions for further research, then, I will move on now to address their concerns.

5.2 Evolving technologies and culture

Those familiar with the discourse of multiliteracies might be wary of my attempt to approach Web literacy from a new angle. I might be criticized of trying to assert Web literacy's dominance over another or all other multiliteracies, or of advancing the agenda of a particular interest group with a vested economic stake in the future of the Web. I would respond that my approach is not an assertion of my particular brand of literacy over another, but rather a reconfiguration of twenty-first century multiliteracies on the Web. Here, Tyner may be inclined to come to my defense as well, given her evaluation of multiliteracy scholarship:

Instead of exploring fresh combinations of multiliteracies as a response to new media, the research literature represents an unfortunate tendency to promote one multiliteracy over another. It is as if proponents hope to define and position the most promising version of literacy in order to deflect educational criticism and maybe to even shore up some sagging professional status in the process. (Tyner 97)

At no point during my argument have I proclaimed that my version of Web literacy, or even the topic in general, represents the “most promising version of literacy” for the future of composition studies. I have acknowledged the increased influence of the Web on our students' composing practices, and I have repeatedly stressed the importance of imparting a

more informed Web literacy to the digital natives who walk through our classroom doors, but I do not believe—and have not asserted—that such a guided approach should come at the expense of other literacy instruction. Mine is a pedagogy that recognizes similar multiliteracies as in support of, rather than in competition with, the subject of my research. Indeed, to circumvent the competition in the first place, I chose to expand a singular subject into multiple conceptual dimensions of literacy, inviting other scholars to do the same. My research serves instead as a periodical update to an ongoing struggle within our field to best serve the needs of our students as those needs adapt and change with their environment. As Selber observes, “one hallmark of a vibrant discipline is discernible shifts in the intellectual paradigms that animate its knowledge” (23). I hope, then, that my thesis marks enough of a discernible shift to animate the collective knowledge of my field.

5.2.1 On technological determinism in the composition classroom

As I bring my research to a close, I think it absolutely prudent to urge instructors in rhetoric and composition not to view Web literacy—or any other multiliteracy, for that matter—as a technological panacea that automatically adjusts to the increasingly digital future to which our students are already accustomed. In other words, new technologies (or even iterations of previous technologies) do not and cannot routinely represent the best decision for us to throw our energies into. Technological determinism can—and often does—infect rhetoric and composition scholars with a misled hope for the future of writing instruction as a way of keeping our jobs relevant in the twenty-first century (Bruce 222; Selber 11; Selfe “Technology” 27). Web 2.0 innovations like blogs, podcasts, and wikis can have an important role in composition instruction in the next decade and may resonate with

many of the digital natives in our charge, but the motivation behind the desire to include them in a curriculum must be in the right place. If instructors include innovative applications in their composition curricula because they assume their students use them anyway, or because they do not want to come off as “behind the times” to their colleagues or department heads, then their students’ experience with each technology will be limited at best, harmful at worst (R. Selfe 155).. If, on the other hand, instructors choose to integrate new technologies with a disciplined eye, a reflective distance that encourages them to consider how these will affect their students’ learning over the long term, then innovations can be beneficial...with a little critical perspective. A steadied critical perspective can also be useful when contemplating multiliteracy practices at universities with limited budgets for new technology initiatives.

To this end, issues like access and the digital divide must be considered when forming an overarching pedagogy of any new literacy of technology, especially one that holds implications for the entire field. The issues raised by considerations of the digital divide have been explored in insightful and extensive detail by a number of talented scholars in rhetoric and composition studies (Bertram; Hawisher; Moran; Powell; C. Selfe; R. Selfe). To address the problem of access in computer-based composition courses here would imply that I have a new perspective to offer that none of these experienced researchers have before; I possess no such perspective, given my rather limited and undiversified experience as an instructor. As my own interactions with Web literacy issues and the classroom change over the term of my teaching career, I will revisit this controversial topic, but for now I will draw on Selber once more to remind us that while disadvantaged minorities rarely have the same access to technology, merely making that access possible does not ensure that they will catch

up. “In order for equitable experiences to take place,” he contends, “these groups need access not only to networked computers that are reasonably current but also to extensive systems of pedagogical and social support” (5). His observation is one we should not take lightly: the key to leveling the playing field for twenty-first century literacies is not to simply provide the technology but to provide the informed pedagogy as well, lest we forget the lessons of *Plessy v. Ferguson*: “separate not equal” rarely ensures equal access.

So, in order to consider the needs of our students at the national level, we each must evaluate the local contexts in which our instruction takes place. Certain technologies are more appropriate to experiment with pedagogically for departments with wiggle room in their budgets, but these may not be wise investments for professors in more penurious positions. Therefore, we must find the balance between enthusiasm and skepticism for new technologies in the classroom, especially those found on the Web; these innovations multiply quickly with blinding speed only to fade into obscurity with the same rapidity. On this technological multiplication, especially in the classroom, Tyner is characteristically skeptical, arguing that

as new communication tools emerge on the social landscape, it will take some scholarly vigilance to temper the tendency to isolate them from other forms of literacy into new, equally false dichotomies that position the technologized world as superior (or inferior) to print-based cultures. (41)

Our time as teachers is precious and stretched, and we cannot always investigate new innovations for their applicability, but “rather than demonizing and rejecting new technologies out of hand, we should criticize their misuse but also see how they can be used constructively for positive ends” (Kellner 215). We should also work in more collaborative and participatory ways as a field to help each other determine the most appropriate contexts

for adopting new technologies, and I believe each of the research projects I articulated earlier may be a step in that direction.

5.2.2 Literacy as a moving target

The realignment of Web literacy that I articulated in the previous chapters should serve as an example of the need to frequently visit our notions of literacy. In the twenty-first century, literacy is a moving target, and a quick one at that. We can try to anticipate where it will go next, but our success would be fleeting, as our notions of literacy would soon shift again to accommodate the rapidly changing nature of the technological landscape.

Selber, again on computer literacy, raises an important question to remember when dealing with any twenty-first century multiliteracy.

Given the fact that literacy is not a monolithic or static phenomenon, with predictable consequences for individuals and social groups, how can the profession conceptualize an approach that will hold up over time and that will illuminate the most important writing and communication issues? (xi)

Selber's hedge becomes mine as well, as I acknowledge that the ideas I have advanced in this thesis are not universally applicable to all college students in composition, nor should it be. To claim a ubiquitous theory is to ignore the rhetorical judgment we prize when assessing the specific needs and abilities of the students that populate our audience.

Attempting to design Web literacy activities around current or popular Web trends like social networking identity sites (Facebook, MySpace, Friendster) or microcontent environments (Wikipedia, blogosphere, Flickr) can be helpful for connecting pedagogical outcomes with students in their native digital environments. This practice, however, may seem ethereally situated in a cultural ideal, as we have no guarantees or ways to predict which sites will be in vogue in five or ten months, let alone five or ten years. Constructing an

integrated theory of Web literacy pedagogy on specific sites alone is risky at best, futile at worst. Doing so, to borrow an expression from my grandfather, would be like “marking the best fishing spots with spray paint.” Let this colloquialism serve as a reminder, then, to ground our instruction not in the fleeting fortunes of fashionable sites but in the carefully articulated outcomes of well-informed scholarship and research.

To keep these carefully articulated outcomes current and applicable, it will take the combined efforts of a talented field of scholars to frequently revisit our notions of Web literacy. Researching this thesis has given me great faith in the nature of collaboration, in our collective ability to work together for creating meaningful and innovative approaches that help our students move from ‘surfing the Web’ to ‘swimming in it.’ It is, after all, a deep ocean of exploration out there; let’s all take a dip.

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