

DIGITAL LITERACIES AND WAC/WID

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DIGITAL LITERACIES AND WAC/WID

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And hereby certify that in their opinion it is worthy of acceptance.

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DEDICATION

for Mom and Dennis, who never doubted

for Sue, who listened, and

for Sharon, who wrote alongside.

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ABSTRACT

This thesis defines digital literacies for an audience of educators who want to integrate digital literacies into their existing curriculum. In this discussion, I examine how discipline-based faculty encourage and support digital literacies and suggest how these faculty might update their courses to include digital technologies and new media. Much has changed with technologies of late, and I argue that educators need to shift from using old technologies and media to using digital technologies and media if they are to help students develop more sophisticated digital literacies. In the past, Writing Across the Curriculum (WAC) and Writing in the Disciplines (WID) programs have successfully helped students in this regard; however, they likely see the need for this shift in emphasis from traditional literacies to digital literacies and are well positioned to network with discipline-based instructors and other constituents on campus to support students' digital literacies in the ways I propose.

CHAPTER 1: INTRODUCTION

This thesis is written for educators who want to incorporate digital technologies and new media into their courses with the aim of helping their students develop more sophisticated digital literacies. Much has changed with technologies of late, and in the pages that follow, I argue that educators need to shift from using old technologies and media to using new technologies and media if they are to help students learn how to communicate more effectively. In the past, Writing Across the Curriculum (WAC) and Writing in the Disciplines (WID) programs have successfully helped students in this regard; however, they likely see the need for this shift in emphasis from traditional literacies to digital literacies and are well positioned to network with discipline-based instructors and other constituents on campus to support and encourage students' digital literacies in the ways I propose in the following chapters. However, before discussing digital literacies in more depth, it is important to understand how old and new technologies differ.

Email, discussion boards, and static web pages can be considered old technologies and media. In fact, according to a July 2005 PEW Internet & American Life Project Report, teens use email especially when they want to “talk with ‘old people’” (ii). Although teens still use email, they prefer to use instant messaging (IM) (ii). The PEW data reveals “32% of *all* teens – use IM every single day” (iii). This shift from email to IM may provide many instructors with new ways to interact with their students, as well as new ways for students to talk to each other about course content. Discussion boards

include those electronic spaces behind password protected applications such as WebCT and Blackboard. Instructors have used these spaces to discuss course content with students, but newer and better methods to encourage discussion are available including blogs and wikis, which I will discuss below. Static web pages include those web pages that serve primarily as sources of information and do not have discussion functionality built into them. As a group, these old technologies provide less discussion and participation opportunities because they are both asynchronous *and* private systems.

On the other hand, new technologies such as IM provide synchronous communication potential and blogs and wikis provide public opportunities for extended discussion. IM can be used to share text, images, and music. Plus, many IM applications allow users to chat in real time. Thus, IM has multimedia and multimodal potentials for teachers and students. Unlike static web sites, blogs provide public discussion opportunities in the form of written posts and comments. Wikis also provide discussion features via the built-in “discussion” page and also a change log accessible via the “history” tab.

In addition to using the above technologies, students also use social networking technologies (web-based sites that offer interactive discussion features) to communicate with each other. According to MacArthur Foundation research, “[e]ighty-seven percent of U.S. teens aged 12-17 now use the Internet...[h]alf of those teen internet (sic) users go online every day...[and] [m]ore than half of online teens have created content for the Internet” (“Digital Media and Learning Fact Sheet”). Using new technologies such as IM, blogs and wikis with students would coincide with the fact that students communicate much more online, as would using popular social networking sites. The most popular

social networking sites include MySpace (<http://www.myspace.com>) and Facebook (<http://www.facebook.com>), where users can create interactive web profile pages and upload songs and images. Further, at Flickr (<http://www.flickr.com>) users can upload, tag (identify with keywords), and share images, while at YouTube (<http://www.youtube.com>) users can upload self-made videos to share and discuss with others. All of these new technologies and social networking sites that enable increased opportunities to share new media and participate in online discussions can collectively be referred to as Web 2.0 tools.

Unlike older technologies that exist on private or proprietary systems, Web 2.0 technologies are based on open participation. In fact, as Tim O'Reilly points out, Web 2.0 tools improve when more people use the sites (O'Reilly). These tools also include collaborative applications such as Google Docs & Spreadsheets (<http://docs.google.com>), which are web-based applications similar to Microsoft Word and Microsoft Excel. However, unlike Word and Excel, Google Docs & Spreadsheets enables users to collaborate by having the functionality to share documents with other users and on the Internet built-in to the feature set of the application. Another aspect of Web 2.0 tools is that they enable people to collaborate online through the use of tags and other descriptors attached to web pages and other online content. One such site is the social bookmarking site del.icio.us (<http://del.icio.us>). Users of this Web 2.0 tool can create a searchable archive of web bookmarks that they identify with titles, descriptions and tags. In addition, Web 2.0 content is based on syndication (RSS), which is a way for authors to publish content at times that are convenient for them. Likewise, with the advent of RSS, readers

are not bound by time constraints. They can read others' content when they want to, not just at the particular broadcast time of publishers. Educators can use these Web 2.0 tools as they help students acquire relevant digital literacies today.

While technologies constantly change and what educators do today may not fully prepare students to communicate in the world after they graduate from college, it is certain that new communication tools will be outgrowths of the way we all communicate today. As such, educators will want to investigate and use these new technologies so they can help students develop more sophisticated digital literacies now.

Since their founding, WAC/WID programs have tried to help students become more literate. One of the reasons for the success of WAC/WID programs is because WAC/WID consultants help instructors in the disciplines integrate writing assignments into instructors' existing curriculum. For instance, WAC/WID consultants help instructors include non-graded assignments, such as freewriting, journaling, reading logs, and bio-poems that help students think about the course material (see Bean "Twenty-Five Ideas for Incorporating Exploratory Writing into a Course," 104-118). WAC/WID leaders also help instructors include problem-based writing assignments that help students express their grasp of course content (see Bean, "Formal Writing Assignments" 73-96). While WAC/WID programs traditionally emphasize these writing to learn and writing to communicate assignments, their primary concern is the thinking and learning that students do. As such, WAC/WID programs and discipline-based faculty are likely interested in the new ways that students think, learn, and communicate today.

While students may continue to use their own language to communicate with their friends, they need instructors' assistance to develop more sophisticated ways of communicating online and about new media in academic and professional contexts. As such, new research and new pedagogies that support the acquisition of digital literacies among students are required. In her seminal text, *Technology and Literacy in the Twenty-First Century: The Importance of Paying Attention*, Cynthia Selfe argues that educators need to not only understand the complexities of technological literacy, but also to help others develop a critical and reflective stance toward technology (24). Understanding complex technologies and teaching more advanced approaches to thinking and learning in a digital age are necessary and WAC/WID programs can help lead this effort.

In the next chapter, I define the digital literacies that educators need to encourage and students need to evidence. In this discussion, I will explain the literacies, including skills, strategies, vocabularies that educators need to learn and use so they can help their students develop similar knowledge and expertise.

In chapter three, I discuss what discipline-based faculty are doing presently to support and encourage digital literacies. Further, I explain what more they can do to facilitate students' acquisition of digital literacies. It is likely they see the need for such work to be done. In the past, WAC/WID has been focused on ways that students write to learn and learn to write, but writing is just one of the ways that students communicate ideas today. Just as WAC/WID has helped instructors teach more traditional literacies, WAC/WID can help facilitate instructors' and students' digital literacies. WAC/WID professionals are in a prime position on campus, both to help students use and understand

digital media and to serve as connectors between faculty across campus to encourage digital literacies in new ways that I suggest below.

In chapter four, I discuss the complications of integrating digital literacies and the changes that I have attempted in a professional writing course at the University of Missouri. While not strictly a WAC/WID course, it functions as a learning laboratory or case study for the ideas presented in previous chapters and should prove useful for instructors in the disciplines as they envision changes for their courses.

Finally, I conclude by speculating on what might be possible if WAC/WID programs were to integrate the use of digital tools and new media in the ways that I argue are necessary.

CHAPTER 2: DIGITAL LITERACIES

In *Electronic Communication Across the Curriculum*, the editors Donna Reiss, Dickie Selfe, and Art Young present twenty-four articles divided into three sections that include creating programs, partnerships, and classrooms that emphasize the intersection of technology and writing across the curriculum. Published in 1998, the articles primarily discuss ways to use email and electronic discussion boards to support writing to learn activities, although there are a few adventurous accounts of using web pages in classroom assignments. These traditional ways of using technologies to support activities that writing instructors are already engaged in is useful; however, I argue that instructors need to support and encourage the use of emerging technologies and ways of composing that new media affords, not always just in support of what these new tools and media offer for traditional composing, but also for what they offer for new media composing.

I contend that students need digital literacies that are dynamic—that expand frequently and offer increased opportunities for engagement. That is, students need to become adept at a range of digital literacies. Further, students need instructors and administrators who are digitally literate. Finally, digital literacies need to be encouraged between and among instructors and students. The digital literacies that educators should advocate include enabling students to use digital technologies and new media to:

- make connections between and among ideas
- build relationships with each other
- demonstrate rhetorical understanding

- share and structure information
- read, design, and produce digital, new media, multimedia, multimodal, visual, audio, and video compositions

Just as there are distinct differences between these categories, there are clear areas of overlap. The last category, especially, covers some of the language instructors need to acquire as they integrate digital technologies and new media assignments in their courses. While discipline-based faculty will want to work to acquire these digital literacies themselves, they will also need to work concurrently to help students acquire these digital literacies. The way people compose and communicate today is so dynamic that educators do not have the luxury of acquiring their own digital literacies before they help facilitate students' acquisition of digital literacies. The speed of technology innovation is a factor. If instructors wait until they think they know enough, the moment will have passed and new technologies and media will have surfaced and require even more changes to literacy instruction. However, what new changes will develop will come from the ways we communicate today. By beginning now to make changes, instructors can act proactively to help students.

Make Connections Between and Among Ideas

In a traditional sense, scholars might use the term “intertextuality” to describe the ability of students to move between multiple texts and make connections, but with digital technologies and new media, this process is much more dynamic. As an author and as a reader of new media texts (blogs, wikis, podcasts, videos, etc.), I “read” what others have composed and make connections between and among their ideas soon after they are

composed. Then, when I read with the aim of responding, I am a more active and critical reader because I will soon compose my own text in response. On the other hand, with print publication, the line between author and reader is much more distinct because of the time delay involved in publication. With digital technologies and new media, the line between reader and author blurs because it is a much more dynamic and conversational process, especially because of the lack of time delay and because authors will have more immediate feedback from their audiences.

To help students understand how to make connections using new media texts, instructors can assign these texts as well as ask students to create these texts. Of particular benefit is to ask students to move between modes, authoring print texts, multimedia, podcasts, and video. Then, students can be asked to make connections or analogies between the different modes to decide what each mode affords. Instructors could substitute a research and new media project for a traditional essay and research assignment. Students would still conduct research to extend their knowledge about a particular text. Then, students could use both the original text and their research to construct an original image using Adobe Photoshop or Adobe Illustrator that draws on both texts. Students would still make connections between and among ideas in texts, but they would use digital tools to create a digital “text” that reflects their ability to make connections. However, by using the digital tools they are also developing digital literacies in the process. In subsequent reflective assignments, students could be asked to explain how the process of creating an image is similar or different than creating a text. For example, when I use Adobe Photoshop to create an image, I am struck by how creating

an image is metaphorically similar to creating and editing a written document. In Adobe Photoshop, different layers of an image can hold different parts of the image. I can then work on each layer independently in isolation and not affect other layers. Further, I can rearrange layers, which not only reorders parts of the image, but I can also change layers' opacity. Editing different layers can be compared to editing different paragraphs. At times, I edit an individual paragraph to improve its development. At other times, I rearrange paragraphs for greater cohesion, which compares to changing the order of layers. When writing, I may also make my arguments more or less explicit, in similar ways that I change the opacity of an image depending on the levels of transparency and the overall affect I desire. If instructors ask students to observe such issues, they will be developing the digital literacy of making connections between and among ideas.

In "Networks and New Media," Jeff Rice argues that "[College English] should be the study of the mixing and remixing of connections" (132). As such, making connections with new media could involve creating something new, as described above, or remaking a text, image, or song from one that already exists. To continue using the new media and research example from above, students could remake another students' image into something else. Doing so would extend the idea of revision, but some instructors may prefer that students write a text that describes the image composition and revision process. Yet such a text could still be designed as layout, fonts, margins, columns, and colors are chosen. However, without either the making or remaking using digital technologies and new media, the principle of 'mixing and remixing' does not fully emerge, nor emerge in the same way. As Lester Faigley notes, "I am discovering, after

years of attempting to teach students to analyze images, that they learn much more quickly when they create images on their own” (13). Teaching students how to use new media tools *while* teaching students to make connections between and among ideas creates a strong digital literacy that instructors can support.

To help students connect ideas amongst texts, Collin G. Brooke asked students in his genre theory course to map the potential audience of their papers (“I map, Cmap, We map”). For this assignment, he asked students “to locate 25 sources in the area where they see their essay or article intervening... [and then] map out those sources [using the tool Cmap] as a means of envisioning, invoking, and/or addressing the eventual audience for their essay” (“I map, Cmap, We map”). Over the course of the semester, students in this class worked on a traditional paper and worked with the tool Cmap and in so doing, they acquired the digital literacy of making connections while also acquiring subject matter knowledge in genre theory.

When students use digital tools to create new media, students are engaging with the ideas of the course. Simply making connections is a traditional literacy; however, using new technologies and media to make connections provides new opportunities for thinking and learning.

Build Relationships With Each Other

The use of new technologies enables instructors, students, and administrators new opportunities to form relationships and help each other understand principles of relationships in new ways. This new understanding is important because not only does it generate goodwill and a sense of community, but also it provides additional opportunities

to learn from each other. The most popular social networking sites include MySpace and Facebook. At these sites, students can upload pictures, write profiles, and comment on each other's sites. Other popular social networking sites include LiveJournal, Xanga, and Windows Live Spaces, which are all online journaling or blogging sites.

While students can help educators become functional users, educators can help students become critical users and present themselves in rhetorically effective ways. How to demonstrate rhetorical understanding will be discussed below, but in this section it is important to emphasize that as educators and students help each other learn, they are building relationships with each other. In order to get up to speed, academics might want to ask students to show them what they know about social networking. Instructors can ask students questions to help them gain knowledge and experience using these tools and also as a way to influence students' critical understanding of the tools. Although I suspect that many students would claim they are presenting themselves exactly as they desire, those presentations can be somewhat scandalous for adults. From my experience surfing the sites, both young males and females frequently post provocative photos of themselves that are not age-appropriate.

Educators can at least help students begin to understand the ramifications of such decisions by using social networking tools such as MySpace and Facebook to connect with students and teach digital literacies. For example, Brian Payst, Director of Technology at the University of North Carolina, Chapel Hill, uses fake profiles, "Ivana Be Stalked," and "Lloyed Unemployed," to educate students about communicating on Facebook (Lupsa). Such use of tools is progressive and powerful. Not many universities

are using these tools in such proactive ways to teach digital literacies, but those who do are taking an important step to help students develop more sophisticated digital literacies. Mercyhurst College also tries to form stronger relationships; they use Facebook extensively to connect students, faculty, and staff (Lupsa). It is a smart move for the majority of students use these sites everyday. According to a PEW Internet & American Life Project, January 2007 report, 55% of online teens aged 12-17 use social networking sites. Those are significant numbers of students who are communicating online. The question an instructor should ask is, “do I want to know more about and participate in the discussion that teens are already having online?” I contend the answer should be “absolutely!” With so many negative news stories about the perils of MySpace and Facebook, if educators are able to join the conversation online, they can move from a hurried reaction to a more reasoned and well thought out response.

Once engaged, educators might realize social networking also replicates, virtually, the way that knowledge emerges among academics. For instance, within an academic community, faculty write papers, attend conferences, and join professional groups. From the discussions within these academic communities, knowledge emerges. In *Computers and Writing*, James Inman situates his discussion within the community of computers and writing scholars. He states, “representing computers and writing as a community means that its character is determined by the relationships and resources individuals share” (2-3). This reference to sharing is significant and it will be discussed in more detail below. Between each chapter of Inman’s text, readers will find narratives written by

scholars active in the computers and writing community. It is from this community that relationships are built and definitions of literacy emerge. However, new media and digital technologies provide an opportunity to extend Inman's method.

In other words, while Inman situates his print text within the computers and writing community of scholars, by using this idea and new media, another scholar could show dynamically how conversations and perspectives (dis)connect. If a text like Inman's were positioned in an electronic network, it could show the influences on each scholar in the community, such as a bibliography of texts cited in their current research or a list of books read recently. Collin G. Brooke explained this concept recently in a blog post, "One of the things we do as academics is to assemble our own private bibliographic networks, and inevitably, the texts we value most highly drift towards the center of our network, and become the default frames that we bring with us both to subsequent reading and our own writing" ("Exposed"). With Inman's print text, readers cannot easily see each community members' bibliographic network, but if new technologies were used, that sort of project becomes possible. However, to do so and still build relationships between people, "individuals involved in [the] work, rather than the scholarship or other knowledge they present [must be foregrounded]" (Inman 3). In other words, such a project could serve to welcome to new scholars in the area and help connect them with others in the community.

Demonstrate Rhetorical Understanding

Demonstrating rhetorical understanding traditionally includes considering audience and purpose and how the author will persuade her audience, but composing with digital tools and new media extends these familiar concepts. Instead of an author simply asking, “who is my audience?” new media authors should also consider, “who are my participants?” When publishing online, texts are available to a much wider audience who have the opportunity to participate, such as on blogs and wikis. In addition, new media authors must consider how they want to provide information to readers. Will producing a text convey ideas best, or will an image, podcast, or video provide a more persuasive mode. Even when publishing a text, digital technologies provide authors with a much wider range of choices for fonts, colors, and layout. Such design decisions should not be made by default, but rather they should be actively considered. In doing so, authors demonstrate rhetorical understanding.

Designing and developing web pages and other multimedia enables students many possibilities to demonstrate rhetorical understanding. Designing includes choosing fonts and colors, creating a logo or header banner and other graphic images, and an overall design of the site, including positioning of navigation and layout of all other elements for the site. Frequently, professional designers will create storyboards that show the design of top level and lower level pages to explain how the design functions and pages relate. Developing includes authoring the code and scripts that function per the design and follows W3C specifications for accessibility whenever possible. W3C is the web standards organization headed by Sir Tim Berners-Lee, inventor of the World Wide Web.

Today, communicating via web sites is essential for corporations. David Neeleman, CEO of Jet Blue Airways recently gave a talk at Northwestern University during which he argued that corporations must ensure 100% uptime for their websites. During a February 14, 2007 storm, many Jet Blue passengers were stranded on runways for an extended period of time. The crisis highlighted how critical it is for all parts of an organization to have up-to-date information and to be able to provide customers with current and reliable information. While many might argue that Neeleman should have responded more quickly, he did publish a You-Tube video on the company's homepage responding to the problems within six days after the incident. Further, he regularly publishes a "flight log" accessible via the "About Jet Blue" section of the site, which is written in a personal voice and contains brief news items relative to his own travels on Jet Blue.

Students need to be able to use and understand these multiple ways of communicating via websites. While providing static content via web sites is useful, companies that provide interactive and conversational elements are making strategic business decisions to improve their overall communications with customers. Interactive elements include search technologies that enable users to find information, customizable options that enable customers to see the product they wish to purchase in different colors and styles, and make a purchase, as well as view videos and screencasts. Conversational elements may include weblogs and real-time chat. When students can evaluate the overall communication plan of an organization, and point out weaknesses and strengths, they become more rhetorically literate. In *Multiliteracies for a Digital Age*, Stuart Selber

takes this one step further and argues that “students who are rhetorically literate can effect change in technological systems” (182). Such a position might be overstated. Within an organization, being able to affect change to interface design means having subject matter expertise about what would make the site more effective, but also it means having the knowledge and experience to know whether such a change is technically possible or feasible. Plus, management approval or oversight responsibilities will be required. At a minimum, a person must know whom to ask about such matters.

In addition to using multiple technologies for composing, students demonstrate rhetorical literacy when they use technologies for other than their intended purposes. For instance, one of the ways that I use my gmail account is as an archive of current work. When I am in the middle of composing a long project, such as this thesis, I will periodically send emails to my own gmail account and attach the most current version of the document. As such, I am using my account not to send messages to others, but to serve as a dynamic archive of my own texts. While this example may not seem particularly remarkable, it is a way to overcome hard drive space issues or university email space constraints that students might not consider. Kathleen Blake Yancey referred to this principle of using technologies in ways other than their intended purpose in her 2004 CCCC Chair’s Address. Quoting D.J. Leu, et. al, from “Toward a Theory of New Literacies Emerging from the Internet and Other ICT, “Envisionments such as this happen regularly as individuals encounter new problems and seek solutions in new and creative uses of existing technologies” (qtd. in Yancy 319). Yancy provides the example of working with architecture students who share ideas in progress with their colleagues

using PowerPoint slides. As such, the students transform the use of the tool from one of final presentation to one of “exploration” (319). Rhetorical understanding of digital tools and new media provides new literacies.

Share and Structure Information

In addition to using social networking tools to create community and facilitate critical discussion as noted above, social bookmarking enables people to share and structure information on the Web. Traditionally, students demonstrate information literacy when they are able to use library databases to find information for research projects. However, new literacies require students to be able to find resources online, structure that information, and share it with others in sustainable ways. One social bookmarking tool is the web-based site del.icio.us. At this site, researchers can tag (provide keywords for) Internet resources, write descriptions, and share information resources. Another social bookmarking and citation manager, primarily for academics, is CiteULike (<http://citeulike.org>).

In the past, communication via email, discussion board, or instant messaging offered new electronic opportunities for collaboration. Today, however, increased opportunities for collaboration come via Web 2.0 tools such as Google Docs & Spreadsheets for sharing documents or tables, Thinkature (<http://www.thinkature.com>) for sharing mind maps, and a myriad of social networking sites, the most popular of which are Myspace, Facebook, Second Life, and LiveJournal, but also collaboration via social bookmarking sites such as del.icio.us. In addition, blogs and wikis have built-in discussion capabilities that can be used for collaborative work. The distinction between

these different forms of collaboration and sharing is whether they are conversational or informational.

Instructors in the disciplines can use tools such as del.icio.us to help students manage information for research. By using the web-based tool del.icio.us, instructors would also be modeling active research. Elizabeth Daly, Executive Director of the Annenberg Center for Communication and Dean of the School of Cinema-Television at the University of Southern California, recommends such an approach, however, she notes that “[s]uch work demands a climate open to experimentation and a willingness to explore and fail...” (36). When I used the tool for the first time with my students to facilitate research and class discussion, I had each group of students find and annotate three resources. I learned that three was too many as after the first one, it turned into something of a race, rather than a careful consideration of materials. Finding one additional source would have been enough. Still, the tool is useful. More examples of using such tools with students are needed.

Alternatively, or in addition to del.icio.us, discipline-based instructors can use CiteULike, a web-based citation manager. This tool enables users (instructors or students) to create links to journal articles in full text databases. Users can also add their own abstracts and notes, as well as tag the article link with keywords. Users can then search others' tags or libraries and find what others are reading on a subject. Using the tool with students, especially in a research-intensive class, would model effective methods of managing research while encouraging students' digital literacies.

An additional way that I have shared information with others is by participating in a teaching carnival. For each carnival period, usually once or twice per month, instructors post teaching reflections to their blogs. Then, a volunteer editor assembles all of the entries, makes connections between different posts, and creates a “carnival post” with links to the different reflections. I hosted one such carnival on October 15, 2006 (Hansen). Assembling such a collection provided me the opportunity to share and structure information for other academic bloggers. Additional carnivals can be found via the Teaching Carnival blog (<http://teachingcarnival.blogspot.com/>).

In the big picture, learning the potentials of sharing and collaborating are important because people from around the world are working to create the semantic web, a term coined by Berners-Lee, inventor of the World Wide Web (“semantic web”). The semantic web is a project being developed by people who advocate freely sharing information and data that can be read and interpreted by computers. For instance, the sharing and use of global positioning data among countries is one example of the type of research and development work involved. Further, Google Maps uses this type of data to publish satellite and traffic information. From a micro perspective, instructors of composition could use the Google “My Maps” feature, which enables the digital annotation of maps, as a way to integrate the study of writing, digital literacies, and place-based rhetorics or storytelling. Moreover, there is a new project undertaken by the U.S. Holocaust Memorial Museum and Google Earth to provide a visual representation of the genocide at Darfur. Using maps, before and after pictures of villages, and personal narratives, the initiative shows how technology, research, and visual compositions are

combined to provide an evocative and more complete account of the carnage. With the sharing of information, the technologies to structure it, and new ways of composing, dramatically different ways of composing research projects emerge.

The philosophy of sharing and structuring information that is found online or in databases demonstrates the concepts of making knowledge visible and transparent. Web 2.0 users who contribute to sites such as del.icio.us or CiteULike are contributing valuable information when they tag and describe resources. As a user of these systems, I can see what other users in my network are tagging, as well as what other general users outside my immediate network find valuable. Both the in-network and out-of-network results are valuable because these users are qualifying general search content. As a result, I can see at a glance how many people find particular resources valuable. The more people who tag resources in del.icio.us increases the numerical identifier. Because this content has been even more highly structured than a Google search, it becomes my first point of search. Likewise, students need to learn more advanced ways of searching than using Google and library databases. When students structure search results with tags and descriptions, they are reinforcing previously mentioned literacies of making connections and building relationships. Equally important, instructors can reinforce rhetorical understanding by asking students to reflect on this process.

Read, Design, and Produce New Media

This category emphasizes that students need to acquire the abilities to read, design, and produce digital and new media compositions. As such, it provides some

needed language that will support and clarify the other literacies while suggesting how these activities are different today.

Reading today can involve a screen interface of varying size or a print artifact. Elizabeth Daly makes a case for the terms “navigates” and “explores,” versus that of reading (36). This modification of terms is appropriate as texts are presented on screens, PDAs, cell phones, and on the Web. To find information, students do need to ‘navigate’ texts by way of menu buttons and scroll wheels. The New London Group provides a useful list to the types of texts; they indicate that texts, or modes, may be audio, visual, gestural, or spatial, as well as linguistic (Cope and Kalantzis 26). Consequently, students will need to develop more sophisticated literacies to listen and feel texts, as well as to read texts. Further, these literacies will overlap as texts are constructed in multiple modes.

As such, students need to be able to design texts for readers. Design is a term also advocated by The New London Group. Editors Bill Cope and Mary Kalantzis state, “The notion of design connects powerfully to the sort of creative intelligence the best practitioners need in order to be able to continually to redesign their activities in the very act of practice”(20). Design includes having the materials to make meaning, performing the work, and the work produced (20). Design captures the essence of authoring in multiple modes, including the words Daly suggests: “creates” or “constructs” (36). For example, choosing to insert images in a traditional text or on a web site, or making decisions regarding page layout, fonts, and colors would all be aspects of design.

Students need to learn design literacies in all of their courses, rather than just designing by default.

Finally, the meaning of produce is to publish. For example, in a web development organization, the producer is the employee who is tasked with publishing new and changed pages to the group's website. Today, users have many production options, especially considering RSS syndication technologies that enable produces to publish at any time for many different platforms.

The texts students read will include print texts and screen texts, such as those on cell phones and may include audio and images. Plus, students need to be able to listen to podcasts. While podcasts can be found around the Web on sites such as Odeo (<http://www.odeo.com>), the most popular site to host podcast is iTunes. While students may have been exposed more recently to critical reading strategies, it is less likely that they have been trained to listen critically. When students listen to podcasts, they may not only need to appreciate the spoken voice, but also the other layers of the track such as background sounds and music, as well as the identify composing strategies such as layering and fading tracks in and out. Further, students also need to be able to read Web texts, which offer increased opportunities for discussion and collaboration. For example, on blogs, readers can offer comments. On wikis (web encyclopedias), readers can leave comments by way of "discussion" pages, as well as collaboratively write the content on the wiki. One such popular example is Wikipedia (<http://wikipedia.org/>). Students are familiar with the site and just as with previous sources, will need to learn strategies for evaluating the available content.

Students should be encouraged to design texts. Design is not something that should be taken for granted, even with traditional essays. It should be actively considered. Instructors may want to begin by having students design traditional essays and choose layout, fonts, and colors before they move into creating images, audio, or videos. However, some instructors may be comfortable asking students to remediate (that is, make over) an essay they have already written and recast it as a podcast. This example would be an effective way to discuss the differences and affordances of the different delivery modes.

To understanding new theories of texts, students need to be able to use and understand visual images in more sophisticated ways. Cynthia Selfe, paraphrasing Kress, vanLeuwven, Debes, and Williams, defines visual literacy as:

the ability to read, understand, value, and learn from visual materials (still photographs, videos, films, animations, still images, pictures, drawings, graphics)—especially as these are combined to create a text—as well as the ability to create, combine, and use visual elements (e.g., colors, forms, lines, images) and messages for the purposes of communicating. (qtd in “Toward New Media Texts”)

While this definition is a good start, it conflates the different vocabulary needed to read and analyze different mediums. For instance, while there is some crossover with terms, there is a different language used to describe still photography than that used to describe video. Still photography uses terms such as texture, value, shape, and repetition (Leigh), while video makes use of cinematic language to include motion, sound, and transitions (Harmon). Further, Elizabeth Daly argues:

To read or write the language of media and understand how it creates meaning within particular contexts, one needs some understanding of frame composition, color palette, editing techniques, and sound-image

relations as well as of mobilization of generic and narrative conventions, the context of signs and images, sound as conveyor of meaning, and the effects of typography. Such principles as screen direction, the placement of objects in the frame, color choices, morphing, cuts, and dissolves all do much more than make a screen communication aesthetically pleasing. (38)

While training in analyzing traditional texts would help students begin to analyze film, they still need to know and understand a specialized vocabulary to more fully analyze cinema and multimedia.

Just as students should consider audience, they need to actively consider how texts will be produced. When a student designs a text, the use of the term implies control over the presentation and the content, images and multimedia. Rather than use the term control, however, Kress (2000) refers to the process as choosing the “most apt representation” (158) and that of “complex orchestration” (160). With new technologies and new media, students have more resources to consider and employ when they produce content. Daly argues four main differences in producing multimedia including more collaboration, experimentation during creative process, and public display and production (36). The film credits to any movie will indicate the great number of individuals involved in the creative process. Perhaps, assigning students to work in groups to author these new types of texts would be an effective strategy. More collaborative production processes ought to compel instructors to consider more collaborative assignments.

While my text makes the argument that students need digital literacies of new technologies while composing new media, it is essential that we remember that there still remain issues with access and use due to race, class, and gender. As Gail Hawisher and Cynthia Selfe note by paraphrasing Brian Street, James Gee, Harvey Graff, and Deborah

Brandt, “we can understand literacy as a set of practices and values *only* when we properly situate our studies within the context of a particular historical period, a particular cultural milieu, and a specific cluster of material conditions” (646). In other words, each person’s acquisition of digital literacies will depend on a particular group of constraints and affordances. Furthermore, Hawisher and Selfe’s studies indicate “how little teachers of English, composition, and communication know about the many literacies students bring to the classroom [for] [o]ur professional radar is tuned so narrowly to the bandwidth of print and the alphabetic...” (676). As such, instructors would do well to widen their focus given how much digital technologies and new media are changing communication.

Conclusion

The categories of making connections between and among ideas, building relationships, demonstrating a rhetorical understanding, sharing and structuring information, as well as reading, designing, and producing new media provide a framework for understanding the digital literacies that students need to acquire, as well as some strategies for implementation and critical vocabulary. However, I do not see collection as prescriptive; rather, as a guide for instructors in the disciplines who seek to integrate new technologies and methods of composing with new media into their courses.

Discipline-based faculty have made a significant impact on students’ traditional literacies. They can have just as significant impact on students’ digital literacies. In the next chapter, I discuss what faculty in the disciplines are already doing to facilitate students’ acquisition of digital literacies. Then, using the framework that I have

established in this chapter, I suggest additional technologies and new media practices that WAC/WID can support and encourage.

CHAPTER 3: DIGITAL LITERACIES AND WAC/WID

Since Writing Across the Curriculum initiatives began in the late 1960s and early 1970s, WAC/WID programs have enjoyed continued success at many colleges and universities because of their emphasis on writing to learn and on writing to communicate. However, according to Martha Townsend, “WAC’s central concern does not usually focus only on students’ writing but also encompasses to one degree or another all of their language abilities—writing, reading, speaking, listening, and especially thinking—along with the relationship of these abilities to the larger issues of teaching and learning” (1299). In addition to a focus on students’ thinking and learning, WAC/WID programs usually include professional development workshops for faculty who want to use writing as a tool for learning in the classroom. As Townsend continues, “Often faculty development is a main focus of WAC programs, the assumption being that as instructional ability improves, student learning improves” (1299). As such, since their founding, WAC/WID programs have concentrated on helping both students and faculty develop key literacies.

Yet, as stated in the previous chapter, the way both students and faculty read, write, and share parts of themselves online is changing the way they live, work, and communicate. For instance, instructors read research articles and students' papers online. They use the insert comment feature of Microsoft Word to provide feedback and email documents to students and colleagues. Both groups read, share, and analyze pictures and graphics on the Web. They also watch videos and listen to music and podcasts for both

pleasure and learning. They publish blogs, wikis, podcasts, web sites, and MySpace pages. Because of these changes, educators need new research and ongoing practices regarding emerging technologies and students' literacy practices.

The most current and comprehensive text that WAC/WID has published recently is that by Charles Bazerman, et. al. entitled *Reference Guide to Writing Across the Curriculum*. In that text, the authors discuss electronic communication across the curriculum in Chapter 9, entitled "New Programmatic Directions." They emphasize Reiss, Selfe, and Young's seminal 1998 text, *Electronic Communication Across the Curriculum* and then briefly review 1980's and 1990's scholarship up to the publishing of the 1998 volume. On the one hand, it is important that electronic communication is mentioned in the 2006 *Reference Guide to Writing Across the Curriculum*. On the other hand, for it to be mentioned as a "new" programmatic direction, and emphasis given to what was then eight year-old research, suggests that new research is needed.

Further evidence that new research is needed can be found in other online sources. At the WAC Clearinghouse, a primary networking site for WAC/WID professionals, there are only 12 resources listed on the bibliography page for electronic communication across the curriculum (ECAC). This fact indicates that either not much publishing is being done in ECAC, or that the tool is just not widely used to share bibliographic information. This lack of sharing indicates the need to develop this literacy among WAC/WID professionals, just as with students, but this situation is also disappointing because "[WAC/WID programs have] depended for their success on the individual commitment of faculty members (and individual administrators) in a grassroots

pedagogical reform movement...” according to David R. Russell writing in “American Origins of the Writing-across-the-Curriculum Movement,” who paraphrases Susan McLeod (Strengthening Programs for Writing Across the Curriculum, 1988) and Toby Fulwiler and Art Young (Programs that Work: Models and Methods for Writing Across the Curriculum, 1990). Although it should be noted that discipline-based faculty face constraints on their involvement in WAC/WID because often their pedagogical work that they and WAC/WID programs value is not often valued to a similar degree by their home departments at the time of tenure and promotion. Still, some grassroots reform is seen in the electronic journal *Academic.Writing*, which was published from 2000-2003. A review of that journal shows many WAC/WID professionals sharing articles, teaching practices, and conference presentations. However, since that journal merged with the *Across The Disciplines* electronic journal in 2004, *Across the Disciplines* has placed less emphasis on technology and learning.

In light of these findings and because of the new ways of writing and communicating discussed in the previous chapter, especially because of the shift to Web 2.0 technologies, it is likely that WAC/WID faculty see the need to continue publishing and to focus on the ways that students and instructors use digital technologies and new media today. In what follows, I review research that has been published since 1998 and suggest ways that it can be used to facilitate digital literacies among students, and I provide recommendations to address outdated practices that do not reflect the shift to new technologies and media.

Current Scholarship

As noted above, the most recent edited collection to focus on the intersection of technology and communication across the curriculum is *Electronic Communication Across the Curriculum*, which was published in 1998. In that text, the individual authors discuss ways to integrate technology while making strong pedagogical decisions. Those approaches are still useful today even though parts of the collection are now somewhat dated because some of the articles discuss challenges with electronic technology that would not even be an issue now. In addition, many new technologies have been developed since 1998, which I discussed in the introduction. What follows is a review of what WAC/WID has published since the Reiss, Selfe, and Young text, *Electronic Communication Across the Curriculum*. From this discussion, readers will see that WAC/WID leaders have emphasized web-based discussion forums and bulletin boards, email, web development and design, multi-modal composing, blogging, filmmaking, and web conferencing technologies. Such discussion is important because it indicates what a few enterprising WAC/WID professionals have already done, as well as show areas for future study and development.

While many instructors now use discussion forums and bulletin boards within course management tools, previous WAC/WID accounts of moving instructors from word processing to the more interactive discussion forums are still useful now because they show how WAC/WID programs might help instructors in the disciplines move to more current digital technologies. In the 2002 text, *The WAC Casebook: Scenes for Faculty Reflection and Program Development*, the editor Chris Anson presents a number

of case studies that would be ideal to use during workshops or other professional development initiatives to show how instructors and students can make connections among ideas and build relationships. In "Through the Back Door Into Cyberspace," an article in *The WAC Casebook*, Dona Hickey and Donna Reiss illustrate how WAC/WID professionals can move instructors from familiar activities such as word processing to more interactive discussion forums by conducting workshops in the same manner that instructors might teach students. For example, Hickey and Reiss describe a workshop they observed in which the workshop facilitators, Chris and Pat, began by asking faculty to write using a word processing program about their own uses of technology and later had the instructors copy and paste that freewriting into a web discussion forum. Such an approach could be used today to move instructors from using course management tools to using a blog or wiki for class discussion. Instructors or students could begin by writing with technologies they know and transfer that writing to other tools. In addition, the authors discuss how changing from instructor-centered pedagogies to more student-centered ways of teaching will require instructors to relinquish some control in the classroom. As noted in the previous chapter, students can be tapped to help instructors learn more about social networking technologies while simultaneously building relationships. Plus, having students teach others may help them become more reflective learners. Further, Hickey and Reiss speculate that as students act—that is, read, write, and collaborate, they may well retain material longer.

Just because instructors use course management software, it does not mean that they are doing so in pedagogically sound ways that WAC/WID programs would support

and recommend. In *The WAC Casebook*, Stephen B. Wiley presents a case study, “Anonymity, Botulism, and Counterfeit Russians,” that relates the challenges faced by Bradley Summers, a history professor, who wanted to use the bulletin boards that are part of WebCT in ways other than how the tool was designed to function. When Summers sought help, the learning technology center representative told him that WebCT’s purpose is to help teachers teach and evaluate students, which reveals that the purpose of WebCT is not to support more student-centered pedagogies as Summers desired. But it does indicate how different groups can envision different uses and purposes of technologies—course management functions versus functions especially designed for student learning. Also in *The WAC Casebook*, is “Lost in the MOO,” a case study by David Jolliffe that provides examples of how email discussion posts can really not contain much discussion because they are asynchronous. The same is true with WebCT discussion posts. If students are only posting versus making connections and building relationships with their classmates, then not much active or collaborative learning is being supported. As discipline-based instructors try new approaches to integrating new technologies and digital media in courses, they will still have to be on the lookout for less than ideal technology uses. While anonymous bulletin board posts may not be the preferred way to use technology today because all learning and knowledge is locked down and invisible to networks of other students and instructors, discipline-based instructors can still facilitate digital literacies by encouraging the effective use of old technology, even as they move to new technologies.

If a technology component like bulletin boards is going to be used, then they must

not be tacked on; rather, they must be integrated into an overall approach to how students may best learn the course material. In an April 2006 article in *WAC Journal*, Robert Miller discusses his experience using WebCT Bulletin Boards in his Applied Child Development Course. He tries the Bulletin Boards after having a really quiet class of students and because the group on campus that provides instructional technology support for instructors was offering paid summer workshops. While he speculates that he was able to reach the more introverted students, his first semester using the Bulletin Boards was not very successful. It was not until the next semester when he replaced his traditional paper journal assignment with WebCT Bulletin Board posting and commenting that he began to see more success and students reported in a week 5, anonymous survey, that they were enjoying the activity. The experience Miller had adds more weight to Mary Hocks's argument that "when pedagogies are seen as add-ons, nothing really changes in terms of epistemological assumptions behind how students access and understand content" (26). These are still important principles for discipline-based instructors. They suggest that WAC/WID will want to work in holistic ways to facilitate digital literacies, similar to how they have worked to integrate writing rather than tack it on to courses.

Some instructors may be ready to use wikis and blogs with their students. In "Doing Philosophy Online," Allan DiBiase presents a variety of different formal and information assignments for electronic discussions with his students. Notably, this professor engages in extended "formal" email dialogues with each of his students in an online Philosophy course, as well as having several different types of discussion posts.

Students even comment on final exams before the instructor reads them. If instructors such as DiBiase were to update their course to use blogs or wikis for such content and discussions, then they would make learning more visible for all students. By sharing their extended dialogues online, it would provide students with opportunities to learn from each other rather than just from the instructor.

With new forms of writing, the line between writing to learn and writing to communicate blurs in ways that WAC/WID can support. Pattie Belle Hastings, Assistant Professor of Interactive Design, and Valerie Smith, Assistant Professor of English, contributed an article, "Blogging Across the Curriculum," to *Direct from the Disciplines*, edited by Mary T. Segall and Robert A. Smart. In the article, Hastings and Smith discuss how they have used blogs to promote learning and improve writing. That is, "Hastings believes that the process of analyzing design, articulating ideas, and expressing thoughts in writing seems to help many design students clarify thinking, understand creative processes, and take ownership of the course material" (72). Further, Smith used weblogs to help students extend their concept of audience (72). Because of their successes, the authors will continue to use blogs to engage students and facilitate thinking, writing, and learning.

More new approaches to traditional papers can be encouraged. In a chapter entitled, "Sondra Gets Hyper," Chris Anson and Ian Anson describe the assessment issues Sondra Krutchnet, an instructor in Cultural Anthropology, had to consider when one of her students turned in a traditional I-Search paper as a web site. While instructors may be more comfortable assigning traditional papers, making a web site is writing, and

developing and designing it facilitates students' digital literacies. Because the Web is very dynamic, it may be challenging at first for students and instructors to create web sites. Mike Palmquist, who has a chapter entitled "Writing in Emerging Genres" in *Genre Across the Curriculum*, discusses his study of students' experiences in three courses in which students developed websites. Web texts could include static websites, but they could also include Flash, blogs, wikis, and other more interactive online texts. The multi-layered nature of the web could inspire more thoughtful analysis if encouraged by faculty in the disciplines. Palmquist notes that one of the graduate students described composing for the web as "somewhat liberating" (230). When students are required or given the option to compose outside of traditional essay formats, it enables digital literacies. Instructors can also ask students to reflect on their design and learning process which would help them develop rhetorical understanding of the composing practice. Finally, WAC/WID leaders can help instructors determine the ways to assess such efforts.

In "Writing in the Age of Technology: Plundering Art for Ideas about Writing," Cara Murray argues that writing courses can be structured much as art classes are, to enable critique and play. Murray notes that "[a]rt is one of the few fields in which students are encouraged and, more importantly, trusted to master the material on their own, while they are shown how to form tight and long-lasting learning bonds with their classmates" (91). Such an approach fits with recommendations in the previous chapter about building relationships because students learn to create a community of artists that encourages each other as well as facilitates their learning processes. As Murray notes, "students' growth depends upon communal input into their work" (92). The students need

interaction with each other in order to learn and grow their own work. Further, they need time to experiment and apply the technological lessons they receive. Murray notes that the most effective web design course is structured so that students could “play” with the topic the instructor introduces. Murray concludes that classes that give up the coverage model are more productive than courses that allow for play. This article has lessons that WAC/WID professionals can learn from when choosing to integrate technology into their classes, especially enabling students to build relationships with each other, in similar ways that they do online with social networking technologies.

WAC/WID professionals who are versed in visual rhetorics can help instructors create sound assignments that involve visual communication. In "Teaching and Learning in a Multimodal Genre Psychology Course," Anson, Daniels and St. Clair evaluate a multimodal assignment in a psychology course taught by Karen St. Clair (one of the joint authors of this article). The authors describe the assignment as a multimodal assignment involving both written and spoken elements. Their discussion of this assignment could elaborate more regarding visual rhetoric because while they do acknowledge that multimodal assignments enable increased use of visual elements, they do not fully explicate it in their discussion of St. Clair's assignment. However, the following article may prove useful in that regard.

Discipline-based instructors can help students analyze the multimodal texts they encounter. In “WAC, WID, ECAC, CAC, CXC, LAC – VAC? Critical Visual Literacy: Multimodal Communication Across the Curriculum," Barb Blakely Duffelmeyer and Anthony Ellertson argue that “multimodal composing more meaningfully reflects the

environment in which students receive and generate text today” (Abstract). Encouraging students to author and design their own multimedia texts enables them to become not just passive receptacles for these types of texts, but active producers as well. Blakely Duffelmeyer and Ellertson elaborate on this idea when they support multimodal critical literacy that helps students develop an:

- understanding that a text is not a transparent window on reality, but is constructed;
- developing and demonstrating rhetorical awareness both as a composer of text and as a reader of text; and
- developing agency as a communicator and as a reader, rather than opting for the passivity that our popular media environment makes so easy. (para. 1)

Similarly, Christopher Thaiss argues that “[j]ust as printed books, visuals-and-text magazines, radio, television, CDs, live theater, Web sites, MOOs, and so on coexist today as venues for ‘writing’ in the marketplace, so school parameters of ‘good writing’ should broaden as these varied technologies continue to become cheaper and easier to use” (308). However, Thaiss points out that “most program participants also agree that definitions of good writing are best left to them, to individual teachers and members of professional groups trying to achieve meaningful, workable standards within shared contexts” (309). In other words, WAC/WID would do well to continue to help support new forms of writing, but may want to be more cautious when helping instructors to define assessment criteria.

Discipline-based instructors who are ready to speculate on how filmmaking assignments could be structured to achieve WAC/WID goals and improve student learning would do well to read “Filmmaking Across the Curriculum.” In the article,

Annemaree O'Brien discusses how instructors might incorporate filmmaking in their courses due to recent advances in hardware and software for digital editing.

Finally, Dickie Selfe contributes a case study to *The WAC Casebook*, about conferencing technology entitled "Connecting Students with Professionals," and asks instructors to consider what conferencing technologies are best for different situations. The example he presents illustrates how conferencing technologies can help connect students with working professionals in the field.

WAC/WID program's past accomplishments include using web discussion forums and email to encourage discussion. Plus, as seen above, faculty in the disciplines have accepted or used web development assignments to discuss the differences between academic and non-academic discourse. This active and lively type of composing is also seen in multimodal genres that encourage visual and cross connections between different types of modes. Finally, some instructors in the disciplines are already updating their courses by asking their students to blog, which also encourages students to make connections, build relationships with other students, share information, and become more reflective learners. Similarly, faculty who explore the potentials of using filmmaking to encourage thinking and learning are truly on the cutting edge.

The Future: WAC/WID and Digital Literacies

As noted in the previous chapter, digital technologies and new media offer increasing opportunities to make connections between and among ideas, build relationships, demonstrate rhetorical understandings, share and structure information, and read, design, and produce new media. Web 2.0 tools (as many web-based new

technologies are called) enable users to collaborate and build relationships, share and structure information, as well as stay productive. Blogging and starting a wiki enable students to make connections and demonstrate rhetorical understanding. Social networking technologies such as MySpace and Facebook provide opportunities for relationship building with students. Plus, summer institutes enable extended focus on new media composing with Adobe Photoshop and Flash, Audacity (<http://audacity.sourceforge.net>), as well as Apple GarageBand and iMovie.

Students and faculty can use Web 2.0 Tools such as Google Docs & Spreadsheets (<http://docs.google.com>) to compose word documents and spreadsheets online. These documents can be shared with a limited group of users for collaboration or published to the Internet. In addition to providing a way for those without Microsoft Word to compose documents electronically, Google Docs can be used for collaborative writing and peer review. Plus, using these web-based applications provide opportunities to consider critical issues with students, such as deciding when collaboration is needed or when more privacy is needed during the composition process. Further, such collaboration can also provoke additional discussions such as, how will sharing the document online with others require an author to adjust her tone, language, or document design.

Discipline-based instructors can also encourage others to use Web 2.0 tools to help them stay organized and structure information. For example, it would be easy to use a Web 2.0 tool such as Backpack (<http://backpackit.com>) to collect links to information on the Web for use in research projects. In addition, Backpack can be used as a project management tool to update to do list information among student groups. Instructors

might also want to combine PageFakes (<http://www.pageflakes.com>) technology to structure information with Google news RSS (syndication) feeds. Doing so would provide an ongoing snapshot of news articles on particular topics.

As mentioned in the previous chapter, instructors in the disciplines can use MySpace or Facebook to build relationships with students while learning more about social networking tools. For example, Washington State University has a profile page at MySpace. On WSU's MySpace, they offer details about the program, current events, and even a slideshow about writers. WAC/WID leaders may want to use this page as an example of how to market their programs with students.

WAC/WID leaders can also facilitate digital literacies by blogging. Keeping a blog enables an author to try an easy form of digital writing and also share information and develop rhetorical expertise. Blogging can be encouraged among students and also at the program level. The University Writing Center at Texas A&M has a blog where faculty can interact with each other about writing. Issues that have been discussed recently include proofreading, revising, editing, error in student writing, grading, tutoring in the writing center, and slang in student writing. Further, the WAC blog at The Ohio State University is one that is used by program leaders to discuss issues in students' writing. Current topics include working with ESL students, plagiarism, handouts, ethics and citation practices, and assessing students' writing. The blog posts have been categorized so that visitors can read by topic or by date order. Blogging does facilitate digital literacies. It is part publishing, part networking, and part professional development. Faculty in the disciplines who blog are immersed in research, publishing,

reflection, and connecting with their colleagues. Because these activities are similar to the activities that WAC/WID leaders promote offline, discipline-based instructors are likely interested in promoting and taking up these types of activities themselves.

WAC/WID leaders and faculty in the disciplines can also attend a summer seminar focused on digital technologies. A two-week workshop format might well be a more comfortable learning experience for WAC/WID leaders since they have used the workshop format themselves to do professional development with others. Mary Hocks advocates for this two-week immersion model. She writes that if instructors “want to promote active, student-centered learning with technology, we need to try it ourselves first and also reflect critically on our experiences as teachers” (28). Providing students with active learning environments is one of WAC/WID programs’ guiding principles and can also be emphasized with digital communication and composition. If WAC/WID professionals are to become advocates for pedagogically sound methods of composing with digital technologies, then they will need to update their own skill-sets. One such summer institute to consider is offered by The Ohio State University. I attended the Digital Media and Composing institute last summer, led by Cynthia Selfe and Scott Lloyd DeWitt. This institute was a beneficial and enjoyable experience because I was able to focus and reflect on using digital tools in teaching and research for a two-week period.

Conclusion

While it seems that WAC/WID efforts have focused on more narrow forms of writing using electronic technologies, perhaps this essay will provide WAC facilitators and discipline-

based instructors with the interest to begin emphasizing digital technologies and new media. As Donna Reiss and Art Young write in “WAC Wired: Electronic Communication Across the Curriculum,” “we cannot predict the future of WAC/CAC/ECAC in relation to technologies that are changing so rapidly...we can predict, however, that such changes will continue to bring new energy to WAC/CAC programs as they consider their place in the academy of the twenty-first century” (73). New technologies and new media may enable WAC/WID programs to negotiate change more easily.

WAC/WID programs are in a prime position to facilitate and encourage digital literacy efforts. Moreover, rather than digital technologies being seen as a fringe issue for instructional technology departments, more students, instructors, and administrators need to learn how to use and understand digital technologies and new media. In the next chapter, I discuss the changes that I am making to encourage digital literacies in a professional writing course. I want students to learn how to make connections using new technologies. I try to create more student-centered assignments so they can build relationships. I use Web 2.0 tools in the classroom to help them learn how to share and structure research information. In addition, they each read, design, and produce new media. This information can be useful for discipline-based instructors as they plan courses that encourage and support their own, as well as students’ digital literacies.

CHAPTER 4: DIGITAL LITERACIES IN PROFESSIONAL WRITING

The types of writing employees do in professional settings is changing because of digital technologies and new media. In the past, instructors of professional writing could ask students to use word processing software, especially Microsoft Word, to complete writing assignments and feel confident they were encouraging the appropriate digital literacy. Currently, more and more employees must use new technologies not only to write electronically, but also use new media tools to professionally design each piece of writing they do. As an instructor of record for a sophomore level professional writing course, I have discovered that teaching professional writing is more exciting because of this dynamic communication situation. Teaching professional writing is also much more difficult. Because professional communications have become media- and technology-rich, reframing professional writing courses from merely using word processing software to promoting higher-order digital literacies among students is necessary and quite challenging.

Instructors in the disciplines face a similar challenge. Past research in electronic communication across the curriculum has largely focused on ways instructors can use computers to complete writing assignments. However, communicating today requires an expanded set of digital literacies as discussed in previous chapters. Just as definitions of professional writing must change, other courses must also change if students across campus are to acquire relevant digital literacies.

In this chapter, I examine ways to redefine professional writing to encourage digital literacies. In this discussion, I explain the complications of redefining the course. From this discussion, discipline-based instructors can learn ways that they might attempt a similar project with their own courses. Further, WAC/WID consultants can understand how instructors might approach such work and develop ways to aid such efforts.

Definitions of Professional Writing

The ways professional writing is taught today is complicated by changing definitions of what it means to write, both within particular professions and among different professions because of digital technologies and new media. In addition, the technologies available at different workplaces and those that are available on campus present options too numerous to name. Further, unless instructors have recently worked in different professions or done extensive research between and among professions, their understanding of what constitutes professional writing may be quite different from the types of writing actually done on a day-to-day basis by current employees. Students may likely possess a limited or mistaken understanding of the types of writing done in or among professions as well. Similarly, programs may be working under the constraints of outdated course definitions when new descriptions and outcome statements are necessary. Finally, there may be a lack of support available to help coach apprehensive teachers and students due to inadequate texts or technical support. Many of these challenges are not new, but presenting them here might assist new instructors understand the scope of the challenges.

As administrators and instructors work to update definitions of professional writing, they must take into account what professionals require. According to the September 2004 Report of The National Commission on Writing for America's Families, Schools, and Colleges, the 53% of responding human resource professionals for multiple industries advised that "[Employees need to be able] to convey content in a tight, logical, direct manner, particularly in a fast-paced technological environment." (8). In other words, employers need employees whose writing is concise, clear, and complete. One particular respondent to the report stated, "We're inundated daily with e-mail, and people have to learn to think in 'core points.' We need presentation skills on the same basis. Most of us have experienced 'death by PowerPoint.'"(12). To address these issues, academics may want to stress visual communication as it may become even more important as images carry part of the communication load and help employees feel less inundated by text.

Defining professional writing can also be complicated by the technology available. For example, the technology available on campus may be different than the technology available at particular workplaces. In some part, web-based technologies as discussed in previous chapters may mitigate some issues with available technology. Nonetheless, each communication situation may be different because of different workplace cultures. As an example, when I worked at Verizon, instant messaging was used a great deal of the time; however, when I worked at Southern Methodist University, instant messaging use was almost non-existent among employees. Instead, at SMU, many employees relied on face-to-face or telephone conversation.

In addition to differing technologies and workplace cultures, many instructors and programs define professional writing differently. For example, Jennifer Bay at Purdue University defines her Introduction to Professional Writing course as follows:

English 306 introduces you to the rhetorical principles and theoretical concepts that you will need as a professional writer. These principles and concepts will help you analyze and respond effectively to a variety of workplace writing scenarios. While the course will address some practical skills such as how to write memos, emails, and reports, we will focus most of our attention on theories of rhetoric, language, and information. (Bay)

Bay focuses on general rhetorical principles, rather than specific technologies. In contrast, W.J. Williamson at the University of Northern Iowa defines his Introduction to Professional Writing course as follows:

This course is designed to be an introduction to professional/technical communication as a profession and academic discipline. We will examine current issues, theories and practices, career opportunities, professional development, significant tools, and UNI's curriculum. (Williamson)

Williamson's course appears to emphasize professional writing as a career as well as the tools used in such careers. Thus, from looking at just these two professor's course descriptions, courses may have a more general rhetorical focus or more of a career preparation focus. I suspect that as many different definitions would be uncovered for as many different professors surveyed. Still, the background and experience of the instructors at each University, as well as the type of University will have a big effect on the nature of each course and how the program writes the course description.

Teaching professional writing is also complicated by students' (mis)conceptions of professional writing. Students in my professional writing class all have different opinions on how the course should be defined. Many students believe the course should

only include writing cover letters, resumes, and memorandums. Although many students send text messages, share images online, and play mp3s with abandon, many of them have ideas of professional writing as it must have been taught twenty years ago. At the University of Missouri, Professional Writing is defined as the “Introduction to the communication required in any professional field, including basic letters and resumes, reviews, reports, and electronic networking, culminating in an extensive report and a related oral presentation” (Professional Writing). Such a broad definition enables each instructor to have different goals and stress different competencies, although each instructor may then stress or ignore new technologies and relevant literacies at will. Thus, students’ experience of the course and the digital literacies they acquire may therefore be quite different.

Further, defining and teaching professional writing is also complicated by insufficient updates to current textbooks in professional writing. Different emphasizes are given depending on whether the textbook is categorized as professional writing, business writing, and technical writing.

In addition to dealing with the difficult decision of text selection, instructors and students may be apprehensive about integrating new technologies for communication in the professional writing course. Even when instructors want to make updates, there may be a lack of technical support provided by either University computing or by the Department. Nevertheless, such updates are necessary given the nature of communications today.

Redefining My Own Course to Encourage Digital Literacies

As an instructor for the University of Missouri's 3-credit hour, sophomore level, professional writing course, I began defining the course by using the course definition: "Introduction to the communication required in any professional field, including basic letters and resumes, reviews, reports, and electronic networking, culminating in an extensive report and a related oral presentation" (Professional Writing). Then, I decided to emphasize digital communication and technologies in the course. The technological updates that I attempted over the past five semesters include: asking students to design shorter documents, incorporating blogging, and moving from print-based portfolios to web-based portfolios.

One update I have made to facilitate digital literacy acquisition is to require students to design documents of shorter length that are later incorporated into a final web portfolio. This focus meets the criteria suggested above for conciseness and also emphasizes my own definition of digital literacies of designing documents and demonstrating rhetorical understanding. For instance, I ask students to write a profile of a person. The assignment requires students to design the document using features in Microsoft Word. Specifically, students must insert images, change the number and size of columns, add page headings, and include sidebars with pullout text or background images. As students design their documents, they work to demonstrate rhetorical understanding as mentioned in Chapter Two. Using software features of Microsoft Word enables students to demonstrate functional digital literacies, as well as begin to understand the effects of different visual design elements.

When students are learning digital literacies, they need assistance understanding not only how to complete a task, but also what principles are being stressed. I contextualized the profile assignment by showing students profiles of students and faculty on the University of Missouri website under University Development and Alumni Relations—all of which are all about 500 words in length. Then, I explained how web writing and writing for print differed. According to Gerry McGovern, author of *The Web Content Style Guide*, “the key difference between writing for the Web and writing for offline readers is that web writing needs to be shorter” (2). The first submission of this assignment requires students to write 500 words and design the document for print, while later I ask students to design and produce the document for their web portfolios. I also explain the principle of writing 10 on 1 versus 1 on 10 as detailed in *Writing Analytically* by Stephen Rosenwasser and Jill Stephen, which involves providing more details about one aspect of the person, rather than multiple aspects of the person. This enables students to focus their writing much more by providing focused details on a person. In addition to the design elements noted above, students also include subheads in their profile document, which improve the document’s readability, both in print and online. As McGovern states, “subheads provide a visual road-sign for readers, alerting them that something different and potentially interesting is coming up” (6) [and] “...on the Web or in email, you should insert subheads often enough so that a reader never scrolls for more than a screen and a half without seeing one” (7). As students move through the assignment, they gain an appreciation for how communication changes from print to digital and how even print forms are changing because of how easy it is for

employees without a background in design to professionally create documents using common technology. While they initially express some apprehension about designing their document using Microsoft Word, they later marvel at how easy it is to accomplish. They are proud of what they create. Further, students consider how the width of columns affects how easily their document may be read on the web and take steps to develop their web pages to improve readability.

The guiding questions of the profile assignment include: (1) How can the writing be focused? (2) How can the document be professionally designed? (3) How can the author improve usability? Initially, students were excited about only having to write 500 words; however, they quickly realize how difficult it is to write exactly 500 words, or even just close to 500 words on someone, which is true for print documents as well as for web pages. They find writing shorter documents can be just as difficult as writing longer documents. I have found that I need to help them evolve their designs from expressing creativity to creating a professional document that can be read easily.

A second update I have made to my professional writing course is to move from using course management technology such as Blackboard or WebCT for discussion posts to having students blog, including both posting and commenting. While some instructors might think that using discussion posts facilitates digital literacies, I feel that they only move a required writing assignment from print to the web and that the technology is not integrated in as meaningful or relevant a way as it might be. The blogging assignments that I have created have changed from the first semester to the fifth semester. The first and second semester's blogging assignment asked students to write posts on various

topics of their own choosing. In the third and fourth semester, I asked students to create “expert project” blogs and post on one subject and show their developing expertise in one topic area. In the fifth semester, much of the blogging that students do requires them to think about how blogging is changing professional communication and serve as a research journal as they complete individual projects. In this way, blogging has evolved from asking students to demonstrate personal knowledge, develop professional expertise, and finally to decipher how blogging is changing communication and research.

Each of the ways that I have assigned blogging in my professional writing class has been productive. In the first two semesters, the aim of blogging was to enable more reflective thinking and writing. In the next semesters, students used blogging to develop expertise and research experience. In both of these assignments, I encouraged students to engage with whatever they were reading, to make connections, build relationships with their classmates, and demonstrate rhetorical understanding. According to Kay Kimber and Claire Wyatt-Smith, “the degree of a learner’s active involvement in a task is directly linked to the effectiveness of their learning. Deeper levels of reflection employ higher-order thinking processes and are more likely to result in value-adding or retention in long-term memory” (29). While seeking to encourage ‘higher-order thinking processes,’ my experience working in industry also influenced how I designed blogging assignments in these semesters. As an example, when I worked with subject matter experts, I had to translate their knowledge into informative and useful web content. Thus, when I designed this blogging assignment, I wanted to provide students with the opportunity to translate their research knowledge for an audience of their classmates and publish their writing on

the web. Discipline-based instructors may want to help students connect with professionals in the field to gain more of an appreciation for how professionals design documents for coworkers and for public audiences. The conferencing technology mentioned in the previous chapter may be useful as instructors think about ways to connect students with professionals outside of the immediate area. Finally, this expert project assignment not only enabled students to learn something on a topic of personal interest to them, but to also learn how to develop a public face or reputation to go along with that personal interest.

In the present semester, blogging has become more meta-conversational—an investigation of the process of blogging and what it enables corporations to achieve. One of the texts we are reading this semester is *Naked Conversations: How blogs are changing the way businesses talk with customers* by Robert Scoble and Shel Israel. The authors discuss blogging and how “[i]f [corporations] ignore the blogosphere—the term used to describe the global network of blog postings—you won’t know what people are saying about you. You can’t learn from them, and they won’t come to see you as a sincere human who cares about your business and its reputation” (2). Accordingly, the blogging assignments have evolved from using a blog for reflective thinking and learning to learning how blogs are changing professional communications. In *The Development of Writing Abilities (11-18)* James Britton, et. al. discuss their study of how students writing abilities develop. Faculty in the disciplines will likely see that when students use blogs, students are able to move back and forth along Britton’s continuum of writing functions,

from the poetic, to the expressive, and finally to the transactional and back again all while acquiring relevant digital literacies.

The guiding principles of the blogging assignments have been to: (1) use writing for thinking and learning, (2) generate continued discussion, (3) develop professional and public writing skills, and (4) develop network literacy. Blogging is a way that students can make their knowledge and expertise on a subject visible. It is important that students get some practice in doing this type of writing. Students gained an understanding of blogging as a “real” type of professional writing when reading assignments showed how people are using blogs to make money and market products. Further, keeping a blog is one way that students can exhibit their writing abilities to prospective employers. Finally, blogging enables students to demonstrate network expertise. According to Jill Walker, blogging as network literacy is “not simply keeping an electronic journal, it's distributed and collaborative; it's learning to think and write with the network” (Walker). That is, as discussed in previous chapters, students need to read and consider what others are writing, making connections between and among ideas, and form their responses by linking ideas between and among other bloggers, which shows the digital literacies of demonstrating rhetorical understanding and building relationships with others.

In future semesters of the course, I would like to develop blogging assignments that encourage both personal expression and professional expertise for I recognize the value of each. For myself, a graduate teaching assistant, I can easily write more personal posts in which I express my feelings as I think through ideas, in addition to writing more professional posts in which I post writing that is much further along because in teaching

writing, both the process and the product are valued. Yet, for my students, I feel more of a tension for them between the personal and the professional. I would like students to experiment with both process and product type blogging so they can become more reflective thinkers and writers. However, I am not sure how to accomplish all of these goals, as well as professionally focused goals on one blog during the entire semester unless their blogs become places of experimentation and they later develop more “professional” blogs if they choose to keep with it following the course. Alternatively, they could use the course blog as a place to experiment with process and their own blogs to post more refined ideas.

I have also used blogging to facilitate collaborative learning, which relates back to my definition of digital literacies that asks students to make connections and build relationships. Frequently, I will ask students to divide into groups, research a topic, and write a group post to the course blog. For example, in Winter 2006, I asked groups of students to do Internet research using the following keywords: writing professional email, dealing with difficult email, email etiquette, managing email, managing your inbox, business email, and how to handle email spam. Then, each group of students summarized their findings in a post to the course blog and linked the sites they used in their research. In this sense, then, I have tried to find ways to use technology to facilitate collaborative learning of course content while also encouraging students’ acquisition of digital literacies. Discipline-based instructors will likely be able to translate an assignment such as this for their own courses.

One additional way I have attempted to update the course is to incorporate principles of visual design. As noted in Chapter Two, students need to develop sufficient abilities to be able to read, design, and produce visual images. During the first semester, I used the model documents in the primary textbook to illustrate good design principles and to facilitate class discussions on font usage, layout, use of images, and color, which relates back to my definition of demonstrating rhetorical understanding. However, while students were able to create documents that mirrored the models; they did not attempt more sophisticated layouts even though future assignments were structured to encourage such work. During the second semester, I supplemented the primary textbook with two additional texts: *ix: Visual Exercises for Technical Communication* by Cheryl Ball and *Designing Writing* by Mike Palmquist. By and large, students liked these extra texts and found them helpful in creating more original document designs.

In the current semester, I have emphasized visual design more than in previous semesters. For example, in the assignment on resumes, cover letters, and thank you letters, students were also required to create a logo of their initials to use on their letters. Students read “Design a Logo of Letters!” by Before & After. Then, I demonstrated how to use Adobe Illustrator to create logos using their initials. From the feedback I have received already, students seem to have enjoyed learning how to use the tool and to express their creativity in a professional manner. Students were able to demonstrate some measure of functional literacy with this aspect of the assignment. In addition to creating a logo, I also asked students to design their resumes. I referred students to the text, *The Non-Designer’s Design Book*, by Robin Williams. In that text, Williams discusses the

design principles of contrast, repetition, alignment, and proximity (13). As such, students considered the size of fonts for headings and body copy, repeating the same layout in different sections, how different elements align for stronger visual effect, and spacing within and between sections. In this semester, more than in any other, students have developed some rhetorical understanding of the choices they are making and how such choices impact their audiences.

Because texts today are both alphabetic and visual (from images to graphics) students need to develop an awareness of how the design of texts aids or detracts from the actual alphabetic content. In “WAC, WID, ECAC, CAC, CXC, LAC—VAC? Critical Visual Literacy: Multimodal Communication Across the Curriculum,” Barbara Blakely Duffelmeyer and Anthony Ellertson call this ability to read both text and visual elements a “critical literacy,” and define it “as the ability to see text (in this case, particularly visual text), not as a transparent window on reality, but as constructed from a viewpoint, with someone’s communicative purpose and a calculated effect in mind” (para 20). Further, according to *The Graphic Design Handbook for Business*, when considering professional communications, students need to understand that:

[e]very physical representation of a company's image...whether it's a letter written on the corporate stationery, a product and its packaging, a brochure or annual report, a logo in an ad, a sign, graphics on a vehicle, or a name badge worn by a counter clerk, offers an opportunity to win respect and admiration. And business can successfully shape favorable consumer opinion by intelligently controlling these many forms of their communication program. (qtd. in AIGA, para 2)

Given this situation, I have tried to give students the opportunity to both interrogate and create visual texts. That is, I have helped them to make connections, and reflect on what

they create and how it reinforces their brand.

I have also updated the unit on resumes and cover letters to include a greater emphasis on design and Internet research. When we begin the unit on resumes, students use multiple job search databases (e.g. monster.com, greenjobs.com, careerbuilder.com, and hiremizzougrads.com) to find a job they would like to have after graduation. Once students find a position they would like to apply for after graduation, they begin drafting career documents especially for this position. In class discussion, I emphasize that technology now allows them to customize documents for each job that they apply for rather than creating one standard resume and cover “form” letter. As such, the literacy practices shift from simply using technology to complete assignments to conversations about what technology affords. In future semesters, I might also ask students to create plain text resumes because so many companies now have websites that enable applicants to apply online. Such a discussion would be productive because students would be asked to reflect further on what different delivery methods enable or prevent.

An additional update that I have incorporated into the course is to move from print portfolios to web based portfolios. In the first three semesters of the course, I gave students the option of constructing either a print-based portfolio or a web-based portfolio. Directions for assembling the both portfolios included creating a table of contents (or home page), an introduction to each piece of writing and a learning outcomes statement, as well as advice to future students who create a portfolio.

Constructing a web-based portfolio gives students the opportunity to consider (1) a different authoring process, (2) how the medium affects the product, and (3) how they

can add visual interest to documents. Students express some initial anxiety when authoring web pages; however, they engage with the process of creating a multimodal project and strive to achieve the exact result they desire. While some students constructed the print-based portfolios with care, others students just printed documents, and although web portfolios can be created with a similar lack of attention to detail, students still gain some understanding of what is involved in creating a web page even if their web pages do not turn out exactly how they wish. Still, they become aware that “the creation of web sites is not merely a hobby of...Information Systems people, but an essential part of [an organization’s] internal and external communication” (van der Geest, 1). When students create web sites, they have the opportunity to learn more about multimodal communication, as well as more about using web development technology.

Conclusion

Students need focused writing and they need to focus on the most important writing that they will do in their future work. As such, they need help to develop relevant digital literacies. As we define and teach professional writing, we need to help students realize that professional writing includes all that they write for print and those documents they read and use on screen. Perhaps, one day they will create only electronic documents; however, today they need experience moving between print and screen. In sum, students need to develop the digital literacy of making connections between and among print and screen documents. Students also need to understand and know how to structure and how their information will be shared and structured in online databases, such as with their resumes and job application letters. Students also need practice in the professional

writing done on blogs so they can gain an understanding that such communications are part of an organization's overall communication plan. In brief, students need to develop their rhetorical understanding of digital technologies and new media. Students gain necessary literacies when they have practice reading, designing and producing professional documents that incorporate color, images, sound, links and video.

While I have made many updates to the course in an effort to encourage professional digital literacies, there is still much that I can do to further update the course. While I have incorporated podcasts as part of the reading assignments for the class, as of yet, I have not had students create audio recordings, although such productions are being published by many organizations. I have also not yet incorporated constructing videos in the class, yet many companies are starting to include videos as part of their communications to customers. As instructors define and teach professional writing, we need to consider all of the ways texts can function and be transformed by the technology in use today, as well as the technology that enables more visual and multimedia elements. Writing professionally today means writing and delivering well-focused and well-designed content for the digital environment we live and work in today. Students need to learn digital literacies in professional writing. I hope students leave my professional writing course with some of the literacies that they will be exposed to and expected to design as part of their work.

CHAPTER 5: CONCLUSION

In my Introduction, I indicated how digital technologies are changing the communication situation and that WAC/WID programs are well positioned to help develop students' digital literacies. In my next chapter, I defined the digital literacies that I feel are important for students to acquire. In chapter three, I reviewed what faculty in the disciplines have already done to encourage digital literacies and what more they can do. In my last chapter, I focused on what I have done to encourage students' digital literacies in my professional writing course.

Throughout this project, my aim was to indicate how discipline-based instructors and WAC/WID programs could support and encourage digital literacies among students and instructors. While WAC/WID's emphasis has been on traditional forms of writing, they are likely to see the need for such work to be done. WAC/WID programs can help students and discipline-based instructors acquire digital literacies. They can both also do the necessary research and professional development work that will help others achieve these goals.

WAC/WID programs are in a prime position to extend their relationships between departments on campus to encourage the digital literacies that I suggest. I suspect that WAC/WID professionals could network with campus technology departments and find people willing to work with them to support and encourage the types of digital literacies I suggest are important and in pedagogically sound ways. I imagine that discipline-based faculty could partner with colleagues in Art Departments to learn more about still

photography and new media tools such as Adobe Photoshop and Adobe Illustrator, as well as Apple iMovie and Adobe Final Cut Pro. I suspect that working with these colleagues would enable instructors in the disciplines to learn more about visual forms of literacy and as suggested earlier, more student-centered pedagogies. Additionally, I think discipline-based instructors would find willing colleagues in Film Departments as they seek to build students' media literacies. Likewise, I think Communication Departments would want to explore ways to make connections between speech and writing. Equally important are discussions with Journalism Departments for blogging has changed the way they make and report news. In sum, the opportunities are numerous for faculty in the disciplines who want to support and encourage digital literacies across campus.

WAC/WID has long supported assignments that help grow more reflective learners. Using new media and digital technologies to demonstrate rhetorical understanding provides another such opportunity. I hope it is clear that I am not advocating just computer expertise, but ways that help students and instructors question and reflect on new technologies and media. Students need help to acquire the digital literacy of reading, designing, and producing new media in effective ways. I believe WAC/WID can help move others in productive directions.

I recommend that WAC/WID programs update their own mission statements and programmatic directions to include facilitating students' and instructors' digital literacies. WAC/WID programs may want to use Clemson University's mission statement as a model:

To improve the written, oral, digital, and visual communication skills of Clemson University students, as writing anchors an interactive social

process with other forms of communication to promote critical thinking, creativity, collaboration, and problem-solving within and across disciplines. (“Communication Across the Curriculum (CAC) at Clemson University”)

This mission statement shows that Clemson has reconsidered the program’s mission in light of new technologies and multiple modes of communication. At the same time, writing has not disappeared from the program.

In addition to other publishing efforts, I also believe it is necessary for WAC/WID programs to take the lead and find ways to share and structure research on digital literacies. WAC/WID programs might want to move to using tools such as CiteULike to manage citations. A good example of the use of this tool can be found in the CiteULike library of Rebecca Moore Howard, who has recently moved her static bibliographic web pages to this interface (Howard).

I believe that my own teaching examples are useful to instructors in the disciplines. If instructors can rethink their own courses in similar ways, they will be doing much to assist students’ digital literacies in meaningful ways.

I think it is vital that students get this kind of education. The ways we all communicate are changing, and we need to work together to help each other develop the kinds of literacies mentioned in this project, which are so relevant for our futures. Students should be able to expect such an education. Instructors need to support such work. Administrators need to be able to respond, rather than react to the new communication situation. And, WAC/WID professionals can lead the way.

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