

2008

## Datagogies, Writing Spaces, and the Age of Peer Production

Joseph M. Moxley

University of South Florida Department of English, [moxley@usf.edu](mailto:moxley@usf.edu)

Follow this and additional works at: [https://digitalcommons.usf.edu/eng\\_facpub](https://digitalcommons.usf.edu/eng_facpub)

---

### Scholar Commons Citation

Moxley, Joseph M., "Datagogies, Writing Spaces, and the Age of Peer Production" (2008). *English Faculty Publications*. 127.

[https://digitalcommons.usf.edu/eng\\_facpub/127](https://digitalcommons.usf.edu/eng_facpub/127)

This Article is brought to you for free and open access by the English at Digital Commons @ University of South Florida. It has been accepted for inclusion in English Faculty Publications by an authorized administrator of Digital Commons @ University of South Florida. For more information, please contact [digitalcommons@usf.edu](mailto:digitalcommons@usf.edu).



ELSEVIER

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

 ScienceDirect

Computers and Composition 25 (2008) 182–202

---

---

Computers  
and  
Composition

---

---

[www.elsevier.com/locate/compcom](http://www.elsevier.com/locate/compcom)

# Datagogies, Writing Spaces, and the Age of Peer Production

Joseph Moxley

*Department of English, University of South Florida, Tampa, FL 33620, USA*

---

## Abstract

This essay investigates how teachers and Writing Program Administrators (WPAs) can use commons-based peer-to-peer technologies to change their roles, to alter writing instruction and literacy genres, and to transform our processes of learning, writing, and collaborating. The essay introduces the term “datagogy” to theorize about the synergy that takes place when “crowds” of teachers employ technologies to construct and debate shared pedagogies. The essay juxtaposes the values and ideologies of two metaphorical communities, the Community of Power and the Community of Learning, explores how these communities use and design online learning communities, and concludes that datagogies are unique interfaces that emphasize the values of the Community of Learning as opposed to the values of the Community of Power. Finally, the essay argues that English studies will concede the central pedagogical stage of the 21st century unless we develop datagogies that engage the creative power of individuals working collaboratively in a climate that respects diversity and independent thinking.

© 2008 Elsevier Inc. All rights reserved.

*Keywords:* Datagogy; Rhetoric; Ideology; Interface design; Writing program administration

---

## 1. Introduction

In this essay, I argue that new communication technologies, particularly commons-based peer-to-peer technologies,<sup>1</sup> are empowering teachers, students, and Writing Program Administrators (WPAs) to radically transform composition pedagogies—changing the roles of teachers and students, changing the content of our curriculums, and changing our processes of composing and collaborating. When crowds of teachers use authoring tools to create pedagogical communities, I believe a new kind of teaching and learning takes place, a kind of teaching and learning that heretofore has been unimaginable. To characterize this new mode of knowledge construction, I introduce the term “datagogies.” I suggest this term can help us articulate what happens when “crowds” of teachers, students, and administrators use social software to develop pedagogical communities that value and are fueled by the

---

\* *Email address:* [moxley@cas.usf.edu](mailto:moxley@cas.usf.edu).

<sup>1</sup> Yochai Benkler and Helen Nissenbaum (2006) coined this term to articulate the benefits of peer-production networks.

“wisdom of crowds”—the surprising ability of crowds of people to develop pedagogies that are wiser and more engaging than those developed by individuals, even disciplinary experts. Rather than being theorized by experts, vetted by the peer-review process, and published after a long wait, datagogies are pedagogies that are subject to immediate revision, collaboration, and even deletion. Via the datagogy, users—other teachers and students—can develop pedagogical practices in real time. Datagogies can challenge traditional assumptions about authorship, authority, collaboration, and power. Teaching, learning, and writing can become more dialogical as opposed to presentational. Knowledge can be conditional, subject to the next edit. Datagogies have the potential to dramatically alter collaboration, creativity, and community. As examples of datagogies, I point to a variety of online learning communities such as Wikipedia, CollegeWriting, Newsvine, Reddit, MetaCritic, or Digg.

To distinguish datagogical communities from less interactive, more autocratically controlled communities, we need to look at how online interfaces distribute power, the ability to author or respond to or critique others’ ideas, and the ownership of ideas. I suggest we need to analyze online interfaces through the critical lenses of two metaphorical communities, the Community of Power and the Community of Learning, to illustrate how values and ideologies influence how teachers, students, and Writing Program Administrators use and design tools. When informed by the values of the Community of Power, I suggest, online communities limit the distribution of power, authorship, dialogue, and ownership of ideas to a select few users, whereas online communities informed by the values of the Community of Learning more evenly distribute power, providing more democratic means for authorship and ownership of ideas. To illustrate this interpretation, I compare authoring and ownership possibilities in Blackboard and Texas Tech’s ICON with Wikipedia and the University of South Florida’s use of SharePoint, a collaboration tool by Microsoft.

As a Writing Program Administrator at a large state university and as the author of a comprehensive online rhetoric, I am interested in exploring how technologies can be used to improve teaching, particularly writing instruction in university writing programs. I wonder whether social software tools can enable teachers to facilitate students’ growth as writers and can provide teachers with opportunities to develop and share effective pedagogies. As teachers and Writing Program Administrators, I believe we need to give some thought to constructing commons-based peer-to-peer interfaces that engage the wisdom of crowds, are as interactive and as exciting as Facebook or Wikipedia, and are as rhetorically rich as the new online websites, sponsored by major magazines such as *Wired*, that allow citizen journalists to publish essays and receive comments—often comments by hundreds of people—on their essays (Rosen, 2007). We need to re-imagine our roles as teachers and learners, questioning how these new technologies change authority—resting authority in the rhetoric of the teacher or writer and the power of the individual to synthesize and reshape ongoing discussions. As researchers, we need to better understand how power is distributed online (Barrios, 2004; Blair & Monske, 2003; Duffelmeyer, 2000; Porter, 2002; Samuels, 2004; Selber, 2004; Spinuzzi, Bowie, Rodgers, & Li, 2003). We need to partner with developers to create textual spaces and online communities that engage the wisdom of crowds.

## 2. The Age of Peer Production and the Wisdom of Crowds

Before analyzing the interfaces of various online communities to better understand the intricacies of datagogies, I would like to take a moment to look at the bigger picture, to consider “So what? Why should English studies care about social software, interface design, and what are traditionally nonacademic genres?” We are at a very tumultuous moment in the history of English departments and literacy practices. Most people today, including college students, do not read fiction, especially the classics. A sample of 17,000 respondents conducted by the National Endowment for the Arts revealed that “18–24-year olds are almost 20% less likely to have read a work of imaginative literature in the last year than they were a decade ago” (Miller & Jackson, 2007, p. 700). In turn, enrollment in English majors has plummeted even while enrollment has significantly increased in other majors throughout higher education: In the year 2000, “there were 20% fewer BAs in English than thirty years earlier” (Miller & Jackson, 2007, p. 683); in contrast, speech departments saw a 500% increase in majors between 1970 and 2000 (Miller & Jackson, 2007). Even so, rather than broadening the purview of English studies, English departments have resisted efforts to revise majors to account for new academic and workplace genres. Over the past few decades, English departments have sheltered themselves from change and circled the wagons because service courses—that is, composition—could fund such myopia. However, now that composition must include a variety of non-traditional genres to ensure relevancy, English departments are undergoing even greater impetus to change.

I believe we are at an exciting tipping point (Gladwell, 2002): although peer-to-peer technologies are relatively simple and insignificant from a technological perspective, they are beginning to have major, disproportionate impacts on teaching and learning processes. English departments can no longer ignore the “80 million MySpace pages, 40 million bloggers, [and] nearly a million amateur encyclopedians” (Anderson, 2007). Newsvine, Wikipedia, MySpace, Facebook—these popular writing sites provide models of new learning environments that enable writers to reach broad audiences for their texts, providing a world stage for collaboration, dialogue, conflict, and innovation. Open Access, Open Archives, Open Source—these are all examples of collaborative, decentralized, online communities where crowds of people interact to construct knowledge. These are spaces that celebrate the values of sharing knowledge and the gift culture of the Internet. We are in the midst of a major change in how knowledge is constructed, interpreted, shared, and archived.

In brief, our society has moved from the Information Age to the Age of Peer Production. As a consequence, our traditional ways of collaborating, authoring, and archiving ideas have undergone radical transformations. The movement from “pencils to pixels” (Baron, 1999) is more than a move from a stick to a hammer: it’s a major transformation in how we think, how we network, and how we compose (Bolter, 1991; Porter, 2002; Ulmer, 1998). Traditional linear texts have given way to multimodal texts—texts that are dialogic, hyper-textual, and, thanks to versioning, under constant revision. These are texts that include multiple channels of communication, including digital audio, video, animation, and multimedia texts. These texts engage new ways of reading, interpreting, and collaborating as they allow users to interact as authors, coauthors, editors, and readers. Online peer-to-peer technologies enable us to establish global learning communities—communities that transcend

traditional geopolitical borders and customs, communities that enable crowds of people to develop free or open source software, such as GNU/Linux, PERL, or Firefox (Anderson, 2007; Benkler & Nissenbaum, 2006; Taylor & Riley, 2005); distributed computer networks such as SETI@home that exceed the speed of the world's faster supercomputers; free, constantly updated texts such as Wikipedia; and web directories and news sites such as Slashdot, Kuro5hin, Newsvine or the Open Directory Project (Benkler & Nissenbaum, 2006); or free social book-marking sites such as del.icio.us. Information worldwide is breaking free, flowing viral-like across the world, challenging and transforming governments, economies, and academic knowledge—changing to some degree what it means to be human, what it means to participate in society.

In James Surowiecki's bestseller, *The Wisdom of Crowds* (2004), he provided evidence for the argument that a crowd of people can make wiser decisions than the sharpest expert in the crowd so long as dissensus is encouraged, the crowd is diverse and characterized by independent thinkers, and aggregation of the collective wisdom of the group is possible. Surowiecki acknowledged “group think” can happen when dissension is prohibited. For example, he offered a lengthy analysis of the Columbia shuttle disaster when the NASA project manager discouraged talk and analysis about the possibility that the space shuttle would self-destruct on re-entry thanks to the damage it experienced during liftoff. Moving from the 1900s to present, Surowiecki cited evidence for the counterintuitive finding that groups can actually be smarter than experts. He traced this argument back to 1906 when Francis Galton, a British scientist, discovered that a crowd of people was better at guessing the weight of an ox than any individual in the crowd—even experts.<sup>2</sup>

For compositionists, Surowiecki's bestselling book on the value of collaborative groups echoed the scholarly work of Richard M. Rorty (1979), Kenneth A. Bruffee (1984, 1986), Karen B. Lefevre (1987), and Andrea A. Lunsford and Lisa S. Ede (1994), who elevated our understanding of the social nature of language practices back in the 1980s and early 1990s. While a few compositionists characterize our discipline's advocacy of collaborative practices as naïve and overblown (Heller, 2003; Smit, 1989), contemporary compositionists have tended to champion peer group work, including classroom reviews of texts, peer evaluations of texts, and collaborative authoring. Surowiecki's underscoring of the importance of allowing for conflict reiterates how collaboration theorists such as David W. Smit (1989), John Trimbur (1989), Geoffrey Sirc and Thomas Reynolds (1990), Susan C. Jarratt (1991), and Rafael Heller (2003) identified and researched the role of conflict within groups. While compositionists have wisely researched and theorized about the social nature of language practices, we have only recently begun to significantly integrate our theoretical perspective with an effort to develop tools that enact our theories.

---

<sup>2</sup> In Galton's study, which was published in *Nature*, the mean guess of the 787 people who estimated the weight of the ox was one pound above the ox's true weight. According to Surowiecki, these results confounded Galton who had expected to prove that experts in the crowd would have better judgment than the crowd, many of whom knew next to nothing about cattle.

### 3. Ideologies that Inform Datagogies

As with any technology, datagogies are not ideologically neutral. The people who shape datagogies have specific goals and assumptions about teaching and learning that shape the interface. To sketch how ideologies can inform design, I would like to revisit Elizabeth S. Blake's depiction of two contrasting value systems/communities in academe. In "Talking about Research: Are We Playing Someone Else's Game?" Blake (1995) illustrated the behaviors of two communities in academe:

- *The Community of Power*: Those who seek to secure power, who are driven by self-interest, winning, and academic prestige, and who are concerned with claiming academic territory and copyright.
- *The Community of Learning*: Those who seek to engage learners, who value the pursuit of truth and understanding, who are more committed to free culture than copyright, and who see all learning as an interconnected, collaborative act.

Blake believes the values that inform the Community of Power have become "so overwhelmingly dominant in our lives that they threaten to engulf the values of the Community of Learning. Education at all levels finds itself awash in competition—competition for power, resources, and recognition—and drowning in the competitive imagery of larger society. The danger is that educational values will be lost" (p. 31).

I understand my depiction of these two these divergent communities or values can be critiqued as a false dichotomy—an oversimplification of our complex, postmodern lives. However, I do not see these communities as binaries, as opposite ends of a single scale, as mutually exclusive positions. For me the values of the Community of Power do not rest on a continuum with the values of the Community of Learning. At times, both sets of values may intertwine to justify interpretation, reflection, and action. Given different contexts, we may focus on different values and align ourselves with different communities—just as, for example, we may primarily subscribe to democratic ideals and consider ourselves to be "Democrats" yet at times agree with "Republicans." While I recognize these limitations, I believe that theorizing and speculating about these communities in a metaphorical way offers us insights into our new literacy practices that we might otherwise not have. Simply put, contrasting these communities and values gives us interesting ways to interrogate database tools—ways to heuristically sketch the ideologies that inform how online writing tools are constructed in higher education and ways to identify the embedded underlying assumptions about teaching and learning that shape different database interfaces.

Below I employ this metaphor as a critical lens to speculate about ways the values and ideologies of these communities influence how we are constructing online interfaces for writers and teachers. Finally, I examine ways to interrogate datagogies and conclude with some suggestions for developing datagogies that harness the creative power of crowds of teachers.

### 4. The Community of Power

The Community of Power assumes that knowledge and justice are achieved by pioneering leaders (as opposed to crowds) who follow their self-interest. The values of the Community

of Power are those of the academic reward system as well as those of our larger society, a society that prizes competition and individual accomplishment. This is the dominant discourse of accountability, standardized testing, and capitalism—the “survival of the fittest” mentality that fuels our world’s economies. This community views universities as corporations and students as customers.

According to the Community of Power, ownership and control of ideas is paramount. This is the model of academic publishing before the Internet, where researchers keep their ideas quiet until they are ready for publication. Researchers are explorers who discover new knowledge. Scholarships, grants, and patents are traded as commodities, as units of power and prestige. This is why universities widely publish the number of grant dollars their faculty “win” each year, particularly federal dollars. Power and prestige are attained by competing for grant dollars, peer-reviewed articles, and university press books. This is a self-serving model and its proponents view an academic career as a competitive game that is won via the competitive pursuit of original publications.

According to Blake, competitive metaphors best describe this community, as we talk about “winning,” “superstar professors,” “carrying the ball,” “touchdowns,” “killing our opponents,” and “making our move.” Perhaps the best metaphor that depicts the values of the Community of Power is Jeremy Bentham’s *panopticon*, an architectural design of a prison that allows one guard to manage the behavior of multiple prisoners: “The concept of the design is to allow an observer to observe (-opticon) all (pan-) prisoners without the prisoners being able to tell if they are being observed or not, thus conveying a “sentiment of an invisible omniscience” (“Panopticon”).” More timely metaphors might be the ubiquity of the surveillance camera or the spyware on our computers that track (via a database) our consumer behavior (Figure 1).

In graduate programs, these values can sometimes translate into rhetorical power moves: “Work with me alone.” “He’s my graduate student and I’ll say with whom he works.” “This is your research agenda.” “If you are on my team, you will keep your mouth shut and do as I say.” In extreme circumstances, trained to compete, faculty and graduate students become secretive about their research projects until they publish their work. In some circumstances, paranoia and competition replace camaraderie. Over time, academic stars can become more accustomed to lecturing and talking than to listening and empathizing.

## 5. Interfaces Designed by the Community of Power

Design interfaces shaped by the values of the Community of Power do not engage the wisdom of crowds; instead, these interfaces limit authorship and agency, following a more autocratic, assembly-line method. Blackboard and WebCT immediately come to mind as influential database tools that were constructed outside of English studies, yet which now guide and shape our work. In first-year composition programs, teachers can use Blackboard to see all of the student work and course materials available on the site as well as to collect statistical data on which parts were accessed, which links were clicked, and how long students spent on each activity. This type of observation can be particularly comprehensive in online courses, where almost every student activity could be recorded and made available for later perusal by anyone with the right level of permissions (Land & Bayne, 2002; Marx, 1996; Porter, 2002;



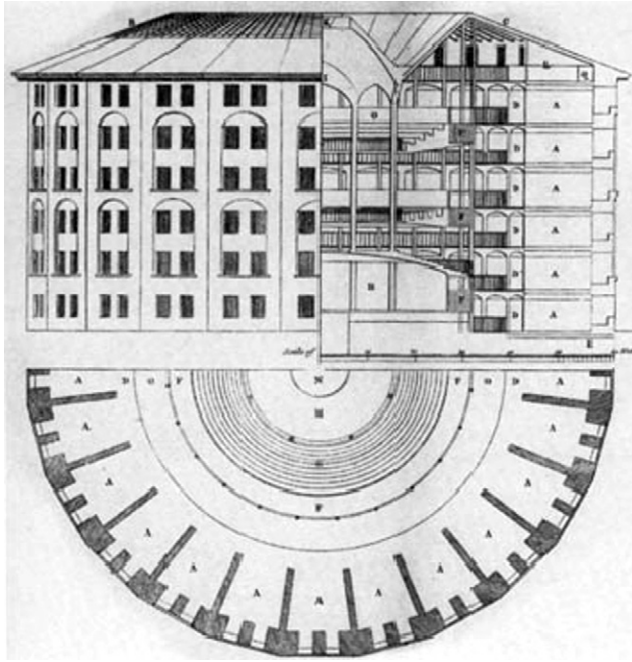


Fig. 1. Bentham's Panopticon Blueprint, 1791 (Panopticon).

Provenzo, 1992; Selber, 2004). Interestingly, these same surveillance tools can be used to observe teachers; a Writing Program Administrator could use these tools to determine how much time a teacher spent grading papers, what kind of marks she made on papers, or how students responded to prompts or participated in online question and answer sessions. All of this information could increase the administrator's power over teachers. In a few moments, an administrator could determine if a teacher was deviating from the standardized curriculum. To zoom out a little more, the work of the administrator could be observed and critiqued by a university's Board of Regents or a state's legislative committee or by some federal oversight committee such as the U.S. Government's Commission on the Future of Higher Education.

As typically configured, Blackboard and WebCT are merely database tools; they are not datagogies—i.e., interactive learning environments developed by teachers and students for teachers and students. By default Blackboard and WebCT are closed environments, preventing students and instructors from seeing what goes on in one another's classes. These tools assume more of a chain gang mentality: power and control lie with the program administrators.

It is possible, of course, that Blackboard rights could be configured so that all users had administrative rights, yet by default Blackboard limits students' and teachers' roles in more traditional ways: Students cannot see other students' writing in other sections or groups; students cannot create assignments for workspaces that allow other students to collaborate; teachers cannot see other teachers' assignments or student work; teachers and students do not share the same writing space. Additionally, at large universities where Blackboard is centrally administered, guest online accounts for students are extremely unlikely because they would create a security risk for the university computing resources. Here the teacher



calls and the students respond. Clearly, this is old-style pedagogy—a pedagogy that allows some collaboration and dialogue, yet which roots ultimate power in the instructor or server administrator. Students can be assigned to groups and discussion forums can be linked to documents, but on the whole Blackboard and WebCT are anti-collaborative, anti-interactive.

ICON (Interactive Composition Online), which was developed by Fred Kemp and colleagues at Texas Tech, provides an example of a database tool that is authored by specialists in English studies, yet which reflects the values of the Community of Power rather than the values of the Community of Learning. ICON fundamentally alters the work of students, teachers, and Writing Program Directors; ICON reflects a remarkable, creative, and thought-provoking departure from business as usual (Wasley, 2006). As illustrated below, ICON does engage students in collaborative discussions of student texts, yet ICON does not engage teachers and students in a shared, dialogic space. For teachers, this is an assembly-line production model. Power is not stored with classroom teachers and “document instructors.” Power resides in the hands of Writing Program Administrators. ICON rejects the wisdom of crowds, focusing instead on providing a delivery vehicle for a curriculum that is defined by Texas Tech’s Writing Program Administrators rather than by its teachers or students.

For students, ICON emphasizes peer response and revision in unique ways. During the typical semester, students write three or four major essays, and they revise each essay four times. Students input all of these documents into the ICON database, which routes the documents to other students and Document Instructors for critique. These reviews are guided by structured peer-review questions and specific evaluation criteria. Students are not graded by their classroom instructors; instead, students are graded by Document Instructors. During the typical essay cycle, students receive between six to eight peer evaluations from students and between six and eight evaluations from Document Instructors. Because this pedagogy emphasizes online peer review, which takes time, and because the database handles the hassles of distributing the drafts and organizing the student and instructor evaluations of the drafts, the students spend less time in class (only one hour each week rather than the traditional three hours). Also, because the burden of the paper load is removed from the classroom instruction, class size is increased, from 25 to 35.

From the student perspective, the pedagogy behind ICON is quite intriguing: by removing the burden of evaluation from the classroom, the classroom teacher can serve as a coach. By having students write in response to the same writing projects, by standardizing grading with evaluation rubrics, and by involving multiple graders, ICON makes evaluation more objective and facilitative. By standardizing the curriculum, ICON ensures students receive a comparable education, which is a departure from most writing programs where instructional activities differ from section to section.

For traditional writing instructors, in contrast, ICON removes the ability to design the class curriculum and the responsibility to grade student papers. Teachers are principally positioned as “end-users.” The Document Instructors, who are charged with applying shared grading criteria and rubrics to evaluating students’ documents, are also positioned as “end-users.” Clearly, this is a top-down model, where experts define the pedagogy and where teachers and students receive and enact the pedagogy. ICON is shaped by the corporate values of efficiency that guide the Community of Power. Education in writing is a commodity, and the university expedites the delivery of this commodity by standardizing the

curriculum. ICON serves as a panoptICON in which the document readers/evaluators are the line workers. All agency here resides in the delivery system to the detriment of the crowd (i.e., the instructors and students) who could, given the chance, help develop and revise the pedagogy.

Fred Kemp (2005) has responded to these criticisms by arguing that agency should not reside with the teachers because most first-year composition instructors are graduate students without extensive teaching experience. In response to teachers' complaints about their loss of agency, Kemp writes,

I am not entirely unsympathetic to this point of view. . . I understand the desire to influence young people personally and the reasons why teachers resent any forces that seem to interfere with that presumed relationship. But my constituency is the 2,600 undergraduate students who take composition courses each semester. As WPA for Texas Tech, I have invested a sense of personal mission in giving all those students the best and most consistent instruction I can. My own personal "psychology of loss" has been played out year after year when a minority of first-year students, perhaps no more than 5 or 10 percent, has encountered erratic, possibly random, even harmful instruction. Ten percent of the first-year students in our program may seem inconsequential, but that percentage can number 260 individual young people. Maybe I can discount them as a percentage, as a batting average, but I cannot discount them as 260 individuals who can be seriously affected by their experience in their first few classes at the university. Of course, the number could be higher. Lacking the kind of data capture that ICON provides, we are only guessing at the previous system dynamics. (2005, p. 114)

In summary, Texas Tech's ICON dramatically redesigns writing instruction, using a database-driven approach that engages students (by requiring them to give and receive multiple peer evaluations on multiple drafts) in the process-based pedagogy of Peter Elbow (1986), Donald Murray (2003), and Janet A. Emig (1971). Additionally, ICON engages students in many of the pedagogical activities celebrated by the social-epistemic rhetoric of James A. Berlin (1988, 1996), Karen Burke Lefevre (1987), and Kenneth Bruffee (December, 1986); students receive copious feedback throughout the writing process from both document instructors and other students. Somewhat ironically, however, ICON positions the *writing instructor* and *writing program* in ways never imagined by these theorists. Here, agency resides more in the hands of the Writing Program Administrator and his colleagues who define the curriculum rather than the classroom instructors who are positioned as end-users. Rather than trusting the instructors to best meet students at the point of need, ICON shifts the pedagogical focus to enacting a shared, program-wide curriculum. Classroom talk about exemplary professionally authored texts and other lectures changes to talk about suggested revisions on students' texts. ICON shifts the focus from an isolated teacher-as-mentor model to a team-oriented, peer-review model.

While the ICON approach is creative and thought-provoking—really transformative from a disciplinary perspective—other online interfaces for writing classrooms are possible, including datagogies that distribute power more broadly, where teachers can work with other teachers and students to shape the curriculum—that is, datagogies that harness the creative power of crowds.

## 6. The Community of Learning

The Community of Learning is characterized by an emphasis on collaboration, gift giving, service learning, and interdisciplinary work, where individuals are less interested in power and self-promotion and more concerned with helping people develop, interpret, and share ideas. Academic prestige and power could be bestowed on leaders, teachers, and writers who ascribe to the actions and values of the Community of Learning, yet power and rewards are a by-product, not an end product. Mother Teresa, for example, was not seeking the Nobel Prize for Peace, a *vitae* line for future advancement. Writing in the 1990s, Elizabeth Blake (1995) suggested the images that guide this community are “webs, tapestries, networks, pieces of a puzzle, shedding light, and patterns” (p. 30).

Now, thanks to the interactive features of the Internet, the prevailing image is that of the knowledge network: the RSS feeds lighting up new blog posts from around the world, the Wikipedia entries or shared bookmarks authored by hundreds of people from around the globe, and the musical compositions compiled via virtual bands formed at sites like [MacJams.com](#) or [iCompositions.com](#). Perhaps the best language we have for discussing this world-wide appreciation for the knowledge-network is that of “WikiLove,” which was coined by the Wikipedia community: “WikiLove . . . refers to a general spirit of collegiality and mutual understanding . . . . If we keep this common goal, this love of knowledge, in mind, if we concentrate on achieving a neutral point of view even when it is difficult . . . then we can reach the state of “WikiLove” (“WikiLove”).<sup>3</sup>

The altruistic values of the Community of Learning are reflected in the countless hours contributed by the millions of people who have authored encyclopedic entries or software code for free, or contributions to web directories, or helpful comments to discussion forums or blogs. In addition to sharing altruistic values, members of the Community of Learning have a deep respect for dialogue and for the process of learning, which can involve participating in projects to extend their own knowledge—to write to learn in the parlance of writing across the curriculum theorists—or to share their insights, to be connected with the invisible college, a community without walls.

Graduate programs that invoke the values of the Community of Learning may be characterized by frequent colloquia where faculty and students share ideas, where students are encouraged to take courses from *all* faculty, where students are encouraged to pursue interdisciplinary questions, where faculty listen to one another and treat one another with respect, where requirements for graduation include interdisciplinary work and a wide distribution of courses, where faculty office doors are open and students don’t whisper when talking about research plans.

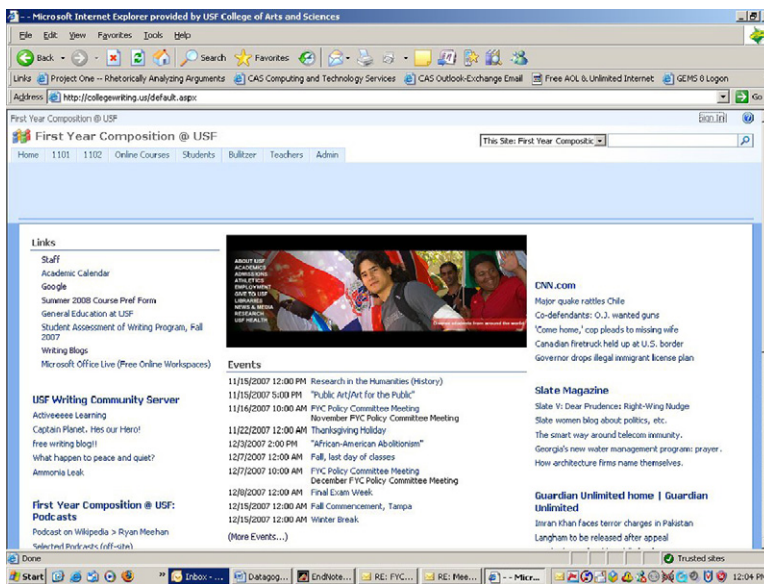
## 7. Datagogies and the Community of Learning

Datagogies can be developed in a variety of interfaces, from content management systems such as SharePoint or Drupal to wiki applications such as FlexWiki or OpenWiki.

---

<sup>3</sup> Interestingly, the Wikipedia page on “WikiLove” was deleted by wikipedia administrators. Wikipedia does not welcome new knowledge because of its mission to be an encyclopedia.

In other words, content management tools or discussion forums or blogging tools can be used to engage the wisdom of crowds. In our writing program at a large state university, for example, we have used SharePoint to engage nearly 100 teachers in a collaborative effort to define and develop our curriculum. Our teachers use a password protected SharePoint site <<http://eportfolio.usf.edu>> to develop shared syllabi and writing-assignments for two composition courses, to develop shared resources, and to coauthor program policies and procedures. This site features some social networking tools that allow users to see when other teachers have updated their syllabus, detailed schedules, or blogs. In addition, we have developed a public portal <<http://collegewriting.us>> that students can use to find teachers and review shared assignments and projects. The results of our efforts have been exciting, with over 40 faculty participating in shared lesson plans, shared writing projects, syllabi, and theorizing about course outcomes and design (Moxley & Meehan, 2007).



Ironically, outside of academe the use of datagogies is far more common and transformative. For example, as mentioned above, under the glow of “citizen journalism,” major magazines such as *Wired* and social networking sites such as *Newsvine* are creating collaborative authoring spaces that allow people to author essays that other users can comment on. When an article has hundreds of comments, the database positions it on the facepage of the site, promoting it to the first page.

The prized software application for the Community of Learning is easy to identify: wikis—particularly *Wikipedia*, an online encyclopedia that contains the collaborative work of thousands of authors worldwide. Working independently and relying on Wikipedia policies to guide them, crowds of people write and edit Wikipedia articles on a 24 × 7 basis, expecting no financial remuneration. While wikis vary in how much power they give users to edit documents—varying from complete “anarchies” where users can change anything to “dictatorships” where changes must be approved by an administrator—most wikis tend to follow the democratic model where everyone has the potential to author, yet where indi-

vidual contributions are weighed by crowds of people against communal policies. Here, for example, is an overview of how Wikipedians monitor the creation and presentation of content:

Maintenance tasks are performed by a group of volunteer developers, stewards, bureaucrats, and administrators, which number in the hundreds. Administrators are the largest such group, privileged with the ability to prevent articles from being edited, delete articles, or block users from editing in accordance with community policy. Many users have been temporarily or permanently blocked from editing Wikipedia. Vandalism or the minor infraction of policies may result in a warning or temporary block, while long-term or permanent blocks for prolonged and serious infractions are given by Jimmy Wales or, on its English edition, an elected Arbitration Committee (“Wikipedia”).

Although exceptions exist, ownership of content in wikis tends to be communal. For example, WritingWiki and TeachingWiki follow Creative Commons Copyright 2.5, while Wikipedia follows the GNU Free Documentation License. Sometimes called “copyleft,” these copyrights have a variety of different licenses, which add various levels of protection. For example, at WritingWiki or TeachingWiki, users can copy any page and create derivative works, yet they must attribute the original source and they must not appropriate the content for commercial gain.

For teachers looking for ways to encourage collaboration and for Writing Program Administrators, wikis offer a powerful, underutilized tool. In academe at this point in time, wikis tend to be used by individual teachers or by several teachers with shared interests, as opposed to writing programs, larger university groups, or professional organizations. Typically, classroom wikis are accessible only to students in the class, presumably past and present. Examples of wikis that address the needs of particular classrooms or academic programs include the following:

- Michael C. Morgan’s wiki sites at the Bemidji State University change each time he teaches a new course subject matter, including wikis for composition, web design, and theory courses. At <http://biro.bemidjistate.edu/wiki/>, Morgan links to course wikis he has developed with his classes since 1995.
- Public Writing Online Wiki, <http://www.writingwiki.org/default.aspx/WritingWiki/PublicWritingOnline.html>, is a classroom project that Darcy Webber has conducted with multiple classes.
- Pennsylvania State University’s wikis, following Richard Doyle’s leadership, provide a portal to composition teachers’ class wikis at the “Wiki Farm”: <http://psuwikiportal.pbwiki.com/>. To view one of the more developed course wikis, see <http://epochewiki.pbwiki.com/>.
- Skidmore College’s Greek Tragedy Wiki, [http://academics.skidmore.edu/wikis/Greek\\_Tragedy/index.php/Main\\_Page](http://academics.skidmore.edu/wikis/Greek_Tragedy/index.php/Main_Page), provides a writing space for students enrolled in a Greek Tragedy course.
- Stanford University’s Journalism Wiki, <http://traumwerk.stanford.edu:3455/Rheingold/79>, directed by Howard Rheingold, provides a community space for a journalism course. This wiki is more of a course management wiki than a content-development wiki.
- Columbia University’s Social Justice wiki, [http://socialjustice.ccnmtl.columbia.edu/index.php/Main\\_Page](http://socialjustice.ccnmtl.columbia.edu/index.php/Main_Page), identifies social justice organizations in the NYC area.

However, some universities and academic journals are using wikis to help direct their programs or to influence teaching across universities—i.e., to create a datagogical space for administrators, teachers, and students to collaborate, as demonstrated below:

- WritingWiki, <<http://writingwiki.org>>, is open for all writers, although it is primarily used by writers in composition courses at USF.
- TeachingWiki, <<http://teachingwiki.org>>, aspires to be a community for college-level faculty, particularly faculty teaching rhetoric and composition.
- Kairos' PraxisWiki: Stories of Digital Tool Use, <[http://praxis.technorhetoric.net/index.php/Main\\_Page](http://praxis.technorhetoric.net/index.php/Main_Page)>, “provide[s] users with narratives from other teachers who are using new technologies in their digital and face-to-face classrooms” (p. par. 1).
- UBC Wiki, <<http://wiki.elearning.ubc.ca/HomePage>>, at the University of British Columbia provides a variety of wiki pages and sites that address new media and online resources.
- ISopedia, <<http://ispedia.terry.uga.edu/>>, at the University of Georgia addresses the unique concerns of information science researchers. This wiki is fashioned after Wikipedia, although its audience is more specialized: academic researchers.
- Rhetoric and Composition Wikibook, <[http://en.wikibooks.org/wiki/Rhetoric\\_and\\_Composition](http://en.wikibooks.org/wiki/Rhetoric_and_Composition)>, aims to offer a creative space for students and teachers to write a free, online textbook for first-year composition.

While wikis such as Wikipedia, WritingWiki, or TeachingWiki may not be absolute democracies or anarchies, these wikis clearly redefine authorship and ownership, celebrating collaboration and revision—and engaging multiple users (writers, web designers, graphic designers, developers, etc.) in content creation. Authors who post texts realize others may come along and add to their texts or revise them in significant ways.

Right now these wikis are seedlings; we do not yet know how they will sponsor new teaching and learning models. Given Wikipedia's success we have reason to be excited about these efforts: When Jimmy D. Wales first developed Wikipedia the nay-sayers dismissed the online collaborative encyclopedia, saying it would never be credible. However, an investigation by *Nature* determined that Wikipedia was nearly as authoritative as the *Encyclopedia Britannica*: “the average science entry in Wikipedia contained around four inaccuracies; Britannica, about three” (Giles, 2006, par. 4).

Perhaps one obstacle to wikis becoming widespread is their inherently subversive nature. Unless a teacher or Writing Program Administrator tweaks the underlying wiki code and rejects the way of “wiki love” by inserting passwords and other rights-management features, wikis democratize teaching and learning. In a wiki that celebrates the power of crowds and the values of Community of Learning, everyone is equal—or, at least, equal until the next edit. This clearly is a new model of teaching and learning for teachers and writing program directors. This is a dramatically different model of learning than ICON or WebCT or Blackboard. Infused and energized by the values of the Community of Learning, wikis offer teachers and students the opportunity to enter, change, and rework ideas in the same rhetorical/compositional space used to control data.



## 8. Critical Datagogy Theory

Typically the values of the Community of Power or Community of Learning are interwoven into our consciousness as rhetorics, discourse communities, and judgment criteria that shape our work. Yet it is possible for one value system to define our actions, our sense of how we should construct a datagogy. Blake explains,

At times we keep the two value systems I have described compartmentalized, so that issues related to jobs, our rights, and our government are decided one way (by means of money, power, justice) while issues related to knowledge are decided in another way (by means of hypotheses, proof, facts). Yet the *same* issues can be looked at either way, as in the case of a family inheritance, for example. One family member may be focused on who will end up as the favored heir while another is more interested in what the distribution of the inheritance reveals about the deceased. (1995, p. 30–31)

In real life, the Community of Power can make aberrant decisions, sometimes unintentionally, when decisions are made out of balance—that is, when the values of the Community of Learning are ignored. For example, the U.S. invasion of Iraq, based on the premise of weapons of mass destruction, reflects a lack of willingness to listen, to be empathetic—as evidenced, perhaps, by the refusal of U.S. officials to listen to UN inspectors in Iraq (Zakaria, December 19, 2005). In circumstances when competing Communities of Power clash, impasses are likely, as illustrated, perhaps, by the U.S. Congress or Senate.

In the context of writing program administration, interfaces can be used to consolidate power in the hands of the administration or developer (e.g. ICON), or they can be used to share power across the board (e.g. WritingWiki). Hence, administrators, teachers, and students need to be critical of online interfaces, capable of evaluating the ideologies that underlie interfaces, and capable of analyzing how the interfaces distribute power and marginalize voices. For example, on the surface Blackboard would seem to empower students: students can easily check their grades online or email other students in their classes. It is not until you step back and examine the interface that you begin to identify ways Blackboard inhibits collaboration. Teachers need to overcome unnecessary obstacles to make lectures, texts, and resources available to multiple courses that they teach. Sharing texts with colleagues is quite difficult. Students do not write in the same space as the teachers as they would on a wiki. Students are boarders, resident aliens, visitors, not residents. Copying a grade book for several hundred sections of first-year composition must be completed one click at a time, 100 times. In short, collaborators beware.

Because these competing ideologies impinge on how datagogies are constructed, we must pay attention to problems of balance—problems that occur when developers do not consider how their design reflects what we know about teaching and learning or how they are positioning users (as technicians or co-developers of knowledge). Below are some questions we can ask to evaluate datagogies:

1. How does the interface configure power relations? Are teachers and students “co-developers”? Can teachers and students add and modify data? Are teachers and/or students positioned as “end-users”? Are they told what to do? When to do it? How to do it? If writing prompts are given, who can alter them? Who decides the criteria for evaluating

writing assignments? How do teachers and students gain access? Is the registration process difficult? How are some users silenced from participation?

2. Does the interface aggregate the wisdom of crowds? How does the interface discourage or prevent collaboration? Is there an effort to focus particular discussions or is the interface so dispersed that it's simply a crowd, a collection of unrelated web pages?
3. What rights management does the tool provide? Who defines permissions for texts—i.e., who can and who cannot access or revise and edit the texts?
4. Who owns the content created by the community? Does ownership reside with a university or does the site use a Creative Commons license? How are the contributions of individuals identified? Are the authors' names buried in the versions, virtually invisible, or placed as authors near the titles, gathered over time from one version to the next?
5. Are surveillance elements integrated into the interface, with consequential rewards and punishments?
6. What social networking features are interwoven into the tool? If an author makes changes to a text are other collaborators updated by email and/or RSS feeds?
7. How intuitive is the tool? Is it attractive? Can it compete with the compelling, interactive design of other popular peer-to-peer knowledge networks? Does it somehow compel users to plant a flag, to add their ideas?
8. Who benefits from the use of a tool? Does the tool come without advertisements?

## **9. Problematizing Datagogies**

In this essay, I have identified numerous benefits to constructing datagogies, particularly datagogies in university writing programs. I have argued that datagogies can harness the energy of teachers and students, creating a dialogic space that empowers teachers and students as co-developers of online learning communities. Rather than enforcing inflexible, top-down administered standardized syllabi, Writing Program Administrators can use datagogies to engage teachers in reflective discussions about multiple, diverse ways to achieve shared educational objectives. Datagogies can facilitate nonhierarchical relationships, with students and teachers collaborating on new projects. Datagogies can enable instructors to collaborate on desired outcomes, design writing projects, share presentations, develop assessment standards, and exchange resources. Datagogies can shatter the isolation that characterizes some classrooms; teachers can connect online with other teachers—they can compare and co-develop materials or take advantage of countless cross-classroom learning opportunities.

I realize that in highlighting the advantages of datagogies, in celebrating the remarkable transformations in knowledge-making that are happening worldwide thanks to peer-to-peer knowledge networks, I may appear guilty of adopting an overly positive stance. As Gail Hawisher and Cynthia L. Selfe (1991), Kristine L. Blair and Elizabeth A. Monske (2003), Cynthia L. Selfe and Paul Meyer (1991), and others have pointed out, our history in computers and composition suggests that we have a tendency to fall prey to the “rhetoric of empowerment”—when technologies are first introduced, we tend to overlook their short comings or exaggerate their positive effects. With this in mind, I want to acknowledge that there are some very real obstacles to constructing datagogies.

First, my depiction of datagogies as being embedded in the Community of Learning as opposed to the Community of Power, as being chiefly inspired by altruistic goals rather than by self-interest, can be critiqued as bloodless, overly theoretical, and impractical. After all, in real life the motivations of the Community of Learning are often intertwined with the motivations of the Community of Power. Hence, some teachers may contribute ideas to an online community for altruistic reasons or because they hope to sort through their ideas and engage the generative process of writing, the tendency to consolidate one's thinking by writing. Academics tend to work in a culture that shares many of the same values as the Community of Learning and this probably explains why academics are so involved in authoring Wikipedia. However, teachers may contribute ideas because they believe it's in their self-interest to do so, which I have associated with the values of the Community of Power. For example, some teachers may contribute to a collaborative group, such as a Wikipedia entry, not for altruistic reasons but because they believe their contributions will be appreciated, will result in prestige, which then can be exchanged in the academic marketplace for tenure, promotion, and other monetary benefits.

Second, while commons-based peer-to-peer technologies have enabled us to better understand that crowds of people can lead to wise decision-making, we also know that individuals, particularly experts, are vital sources of innovation. As a confirmation of this we need look no further than at a recent survey of 162 surveys completed by faculty at 72 doctoral-granting programs in rhetoric and composition, which was conducted by [Daniel Anderson et al. \(2006\)](#). This survey found that innovation in our field in the form of use of new media comes not at the disciplinary level, not at the university level, not at the programmatic level—in other words not at the crowd level, but at the level of the individual faculty member:

- the majority of multimodal composition was occurring at the individual level and not necessarily in program-wide efforts, even if curriculum committees were aware of those efforts as indicated by the 71% of respondents ( $n = 29$ ) (p. 69).
- 83% of respondents ( $n = 35$ ) identified that individual instructors were involved most in the development and implementation of multimodal composition assessment practices at their various institutions (q31) (p. 70).
- One hundred percent of the teachers who responded ( $n = 42$ ) to how they learned the technologies reported they were primarily self-taught (q73) (p. 73).
- These teachers reported being largely on their own as they planned, implemented, and assessed multimodal learning experiences for students: 97% reported ( $n = 40$ ) that they trained themselves how to implement multimodal pedagogies into their classrooms (p. 74).

Clearly, individuals as well as crowds are vital sources of innovation and creativity. Hence, when we consider how to develop an interface for writing programs, we must do more than focus on how to create a datagogy, an interface that engages the wisdom of crowds; we must also consider how the interface enables individuals to contribute new or contradictory threads.

Third, academics privilege individual over collaborative effort. Standardized testing, coursework that assigns grades for individual effort, theses and dissertations written by individual scholars, a scholarly reward system that awards tenure primarily based on individual accomplishments—these are core examples of how educational processes value individual over collaborative work. Even how we train our graduate students has not changed signif-

icantly despite major changes in literacy practices. Many of our programs share the same shortcomings that [Kenneth Bruffee mentioned back in 1984](#):

The graduate training most of us have enjoyed – or endured – has taught us, in fact, that collaboration and community activity is inappropriate and foreign to work in humanistic disciplines such as English. Humanistic study, we have been led to believe, is a solitary life, and the vitality of the humanities lies in the talents and endeavors of each of us as individuals. What we call discussion is more often than not an adversarial activity pitting individual against individual . . . If we look at what we do instead of what we say, we discover that we think of knowledge as something we acquire and wield as individuals relative to each other, not something we generate and maintain in company and in dependency with each other. (p. 645)

Fourth, Surowiecki’s theory that one merely needs to aggregate the wisdom of crowds is problematic when you consider the complexities of cultures, ideas, and people. How can one identify the center, the true gist that represents the wisdom of crowds, in a culture that truly is characterized by independent thinking, diversity, and creativity? Of course, one answer to this question is that dialogue via various textual formats (face-to-face discussions, blogs, forums, and wikis) will reveal the wisdom of crowds, but in practice this is still a problematic matter. From postmodernism, composition theory, and practical experience we know creativity and diversity can lead away from standardization and aggregation, that collaboration and conflict can overwhelm consensus ([Heller, 2003](#); [Jarratt, 1991](#); [Sirc & Reynolds, April 1990](#); [Smit, 1989](#); [Trimbur, 1985](#)).

Fifth, I understand that you cannot simply add a technology to a group of people, particularly faculty in a writing program, and expect a community to develop. Given time and people who serve as connectors or advocates, community may eventually develop; yet it is also possible that a “community” could be comprised of “generals” or otherwise nonconforming people who refuse to follow or collaborate. Ultimately agency and creativity reside in the will of individuals, not technologies. At this point in time we may not know exactly why some people contribute to peer-to-peer communities and others do not. We clearly need more research in the area of technology diffusion to better understand how to nurture the wisdom of crowds. Terms such as [Everett M. Rogers’ \(1995\)](#) “early adopter” or “laggard” may appear intuitive and be helpful, yet we clearly need additional research in this area to understand how technologies need to be designed to harness the wisdom of crowds or how to help groups move from “laggards” to engaged citizens.

Sixth, nationwide, we know that faculty are reluctant to try new tools ([Rogers, 2000](#); [Yohon & Zimmerman, 2006](#)). In some cases faculty face such a steep learning curve that they become frustrated and disenchanting before they can ever hope to achieve agency. While faculty may acknowledge the importance of technology to the teaching and learning process, they still tend to shun it ([Brzycki & Dudd, 2005](#); [Rogers, 2000](#); [West, Waddoups, & Graham, 2007](#); [Yohon & Zimmerman, 2006](#)). Faculty members’ dislike and distrust of communication technologies may explain why there are so few datagogies. A visit to many of the websites of leading composition and rhetoric or large writing programs in 2007 indicates that most universities offer “brochureware”: that is, “monologic sites that primarily provide information about an academic unit, with strongly limited feedback or contributions from those who are represented by the site” ([Spinuzzi, p. 168](#)) as opposed to interactive websites that engage the wisdom of teachers.

Finally, there is considerable concern among faculty that new technologies will further marginalize composition faculty. For example, Robert Samuels argues that “recent initiatives concerning the use of computer-mediated instruction to improve writing skills in large lecture classes often work to undermine the professional status of composition teachers in North American universities” (2004, p. 63). Certainly these are serious and valid concerns that we must consider and guard against.

## 10. Call to Action

While criticisms of my depiction of datagogies may be warranted, we cannot dismiss the millions and millions of authors who are toiling away online, developing their ideas and helping others develop ideas. We clearly have evidence that our traditional ways of authoring, collaborating, and archiving ideas are being challenged by new technologies. Commons-based peer-to-peer networks can enable us to open our classroom and university doors, to place present and past classes in dialogue with one another, to engage students globally in writing and learning communities. From collaborating and authoring practices in and out of academe, we have evidence that we are at a transformative tipping point, a juncture in habits and assumptions that may significantly change global societies—a move from the Knowledge Society to the Age of Peer Production. Clearly, then, it makes sense for us as educators to consider how these technologies can improve teaching in writing programs. An open interface that records and helps aggregate the collective wisdom of teachers, Writing Program Administrators, and students would seem to be an ideal way to structure and energize dialogic programs—programs responsive to the university mission, the needs of society, and the expectations of academic disciplines. Over the last decade, it has become commonplace for WPAs to argue that our writing programs should decentralize hierarchies, move away from the WPA as authority figure, move toward more democratic structures (Anson & Rutz, 1998; Gunner, 1994; Johnson-Sheehan & Pain, 2004). Today’s peer-to-peer knowledge networks offer us an excellent way to operationalize these theoretical goals.

Hence, in this article, I have theorized about datagogies to call attention to how writing programs can engage the wisdom of teachers to make our writing programs more effective. I have revisited two metaphors introduced by Blake in the early days of the Internet because they give us a useful perspective to evaluate online interfaces. In closing, I wish to emphasize that my intention in comparing Blackboard, WebCT, or ICON to various wiki applications was not to prove the superiority of a particular interface but to articulate the ideological differences that shape the interfaces and to identify contexts where one interface might be preferable to another. While at first glance it might seem reasonable to depict the Community of Power as the villain in this story, a more reasonable perspective would be to characterize it as an inevitable dimension of life, as a ying and yang, two parts of a whole. In my opinion, we are at an exploratory phase of the Age of Peer Production, so experimentation within English studies such as that achieved by Texas Tech or USF or *Kairos* should be celebrated. Even so, as Cynthia Selfe and Richard Selfe cautioned in the 1990s, we need to give some thought as to how power is distributed in these new interfaces (1994).

We need to figure out how to harness the incredible creative energy of teachers and students to dialogue about learning practices. I believe that if we do not assert our right to design and develop our own datagogies, we will concede the central pedagogical stage of the 21<sup>st</sup> century. As a community, we need to brainstorm on ways to develop datagogies to enact our theories and engage students in the writing process, to make evaluation more objective, and to make our curricula more responsive to the needs of students and instructors. Imagine if the thousands of composition and rhetoric faculty and others interested in English studies collaborated online, coauthoring texts and pedagogies in collaborative writing spaces such as TeachingWiki or WritingWiki.

For many of us, the move to conceptualizing datagogies is one more step away from the texts that inspired us to pursue English studies. In the 1980s, we moved from printed books and CD ROMS to the Internet. In the 1990s, we celebrated hypertext and multimedia. Now we are celebrating an age of interactivity and open access, where crowds of people work collaboratively—often unaware of one another as individuals—on projects that could not have been imagined before the development of social networking tools. Clearly, to account for these new literacy practices we must broaden the nature of our work, our conception of what constitutes texts and how to prepare our students as citizens and critical thinkers. Unless rhetoricians become more involved in designing datagogies, they will lose their voices and authority as teachers. Clearly, these are exciting times for educators. A new writing space is now within our grasp. What is left to us is our collaborative imagination.

## Acknowledgements

I thank my reviewers for this article as well as colleagues, especially MC Morgan, Ryan Meehan, Quentin Vieregge, Darcy Webber, and Matt Barton. I am particularly indebted to Terry Beavers, who exemplifies the values of the Community of Learning and who has administered over the years dozens of interfaces for us to investigate at USF.

*Joe Moxley*, <<http://joemoxley.org>>, is a professor of English at USF (University of South Florida) where he directs the First-Year Composition program. In 2004 Moxley received the Distinguished Book Award from *Computers and Composition* for *College Writing Online*.

## References

- Anderson, Chris. (2007). People power <Wired.com>. Retrieved April 3, 2007, from <[http://www.wired.com/wired/archive/14.07/people\\_pr.html](http://www.wired.com/wired/archive/14.07/people_pr.html)>.
- Anderson, Daniel, Atkins, Anthony, Ball, Cheryl, Millar, Krista Homicz, Selfe, Cynthia, & Selfe, Richard. (Fall, 2006). Integrating multimodality into composition curricula: Survey methodology and results from a CCCC research grant. *Composition Studies*, 34(2), 59–84.



- Anson, Chris M., & Rutz, Carol. (1998). Graduate students, writing programs, and consensus-based management: Collaboration in the face of disciplinary ideology. *Writing Program Administration*, 21, 106–120.
- Baron, Dennis. (1999). From pencils to pixels: The stages of literacy technologies. In Gail E. Hawisher & Cynthia L. Selfe (Eds.), *Passions, pedagogies, and 21st century technologies* (pp. 15–33). Logan: Utah State University Press.
- Barrios, Barclay. (2004). Reimagining writing program web sites as pedagogical tools. *Computers and Composition*, 21, 73–87.
- Benkler, Yochai, & Nissenbaum, Helen. (2006). Commons-based peer production and virtue. *The Journal of Political Philosophy*, 14(4), 394–419.
- Berlin, James A. (1988). Rhetoric and ideology in the writing class. *College English*, 50(5), 477–494.
- Berlin, James A. (1996). *Rhetorics, poetics, and cultures: Refiguring college English studies*. Urbana, Illinois: National Council of Teachers of English.
- Blair, Kristine L., & Monske, Elizabeth A. (2003). *Cui bono?*: Revisiting the promises and perils of online learning. *Computers and Composition*, 20, 441–453.
- Blake, Elizabeth S. (1995). Talking about research: Are we playing someone else's game? In J. M. Moxley & L. T. Lenker (Eds.), *The Politics and processes of Scholarship*. Greenwood Press.
- Bolter, Jay D. (1991). *Writing space: The computer, hypertext and the history of writing*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Bruffee, Kenneth A. (November, 1984). Collaborative learning and the “conversation of mankind”. *College English*, 46(7), 635–652.
- Bruffee, Kenneth A. (December, 1986). Social construction, language, and the authority of knowledge: A bibliographical essay. *College English*, 48(8), 773–790.
- Brzycki, Dolores, & Dudd, Kurt. (2005). Overcoming barriers to technology use in teacher preparation programs. *Journal of Technology and Teacher Education*, 13(4), 619–641.
- Duffelmeyer, Barbara B. (2000). Critical computer literacy: Computers in first-year composition as topic and environment. *Computers and Composition*, 17, 289–307.
- Elbow, Peter. (1986). *Embracing contraries: Explorations in learning and teaching*. Oxford: Oxford University Press.
- Emig, Janet. (1971). *The composing processes of twelfth graders*. Urbana, Illinois: National Council of Teachers of English.
- Giles, Jim. Internet encyclopaedias go head to head <[news@nature.com](mailto:news@nature.com)>. Retrieved March 28, 2006, from <<http://www.nature.com/news/2005/051212/full/438900a.html>>.
- Gladwell, Malcolm. (2002). *The tipping point: How little things can make a big difference*. Boston: Back Bay Books.
- Gunner, Jeanne. (1994). Decentering the WPA. *Writing Program Administration*, 18, 8–15.
- Hawisher, Gail E., & Selfe, Cynthia L. (1991). The rhetoric of technology and the electronic writing class. *College Composition and Communication*, 42, 55–65.
- Heller, Rafael. (2003). Questionable categories and the case for collaborative writing. *Rhetoric Review*, 22(3), 300–317.
- Jarratt, Susan C. (1991). Feminism and composition: The case for conflict. In P. Harkin & J. Schilb (Eds.), *Contending with words: Composition and rhetoric in a postmodern age* (pp. 105–124). New York: MLA.
- Johnson-Sheehan, Richard, & Pain, Charles. (2004). Changing the center of gravity: Collaborative writing program administration in large universities. *Technical Communication Quarterly*, 13(2), 199–210.
- Kemp, Fred. (2005). Computers, innovation, and resistance in first-year composition. In S. J. McGee & C. Handa (Eds.), *Discord and direction: The postmodern Writing Program Administrator* (pp. 105–122). Logan, Utah: Utah State Press.
- Land, Ray, & Bayne, Sian. (2002). Screen or monitor? Surveillance and disciplinary power in online learning environments. In C. Rust (Ed.), *Improving student learning using learning technology* (pp. 125–138). Oxford: OCSLD.
- Lefevre, Karen Burke. (1987). *Invention as a social act*. Carbondale: Southern Illinois UP.

- Lunsford, Andrea A., & Ede, Lisa S. (1994). Collaborative authorship and the teaching of writing. In Martha Woodmansee & Peter Jaszi (Eds.), *The construction of authorship: Textual appropriation in law and literature* (pp. 417–438). Durham, NC: Duke University Press.
- Marx, Gary T. (1996). Electric eye in the sky: Some reflections on the new surveillance and popular culture. In D. Lyon & E. Zureik (Eds.), *Computers, surveillance, and privacy* (pp. 193–208). Minneapolis: University of Minneapolis Press.
- Miller, Thomas P., & Jackson, Brian. (2007). What are English majors for? *College Composition and Communication*, 58(4), 682–708.
- Moxley, Joe, & Meehan, Ryan. (2007). Collaboration, literacy, authorship: Using social networking tools to engage the wisdom of teachers. *Kairos: Rhetoric, Technology, Pedagogy*, 12(1)
- Murray, Donald. (2003). *A writer teaches writing* (2nd ed.). Heinle.
- Porter, Jim. (2002). Why technology matters to writing: A cyberwriter's tale. *Computers and Composition*, 20, 375–394.
- Provenzo, Eugene F. (1992). The electronic panopticon: Censorship, control, and indoctrination in post-typographic culture. In C. Myron & Tuman (Eds.), *Literacy online: The promise (and peril) of reading and writing with computers* (pp. 167–188). Pittsburgh: University of Pittsburgh Press.
- Rogers, Everett M. (1995). *Diffusion of innovations* (4th ed.). New York: Free Press.
- Rogers, Patricia. (2000). Barriers to adopting emerging technologies in education. *Journal of Educational Computing Research*, 22(4), 455–472.
- Rorty, Richard M. (1979). *Philosophy and the mirror of nature*. Princeton: Princeton University Press.
- Rosen, Jay. (2007). Citizen journalism wants you! <Wired.com>. Retrieved April 3, 2007, from <<http://www.wired.com/techbiz/media/news/2007/03/72970>>.
- Samuels, Robert. (2004). The future threat to computers and composition: Non-tenured instructors, intellectual property, and distance education. *Computers and Composition*, 21, 63–71.
- Selber, Stuart. (2004). Technological dramas: A meta-discourse heuristic for critical literacy. *Computers and Composition*, 21, 171–195.
- Selfe, Cynthia L., & Meyer, Paul. (1991). Testing claims for online conferences. *Written Communication*, 8, 162–192.
- Selfe, Cynthia L., & Selfe, Richard J., Jr. (1994). The politics of the interface: Power and its exercise in electronic contact zones. *College Composition and Communication*, 45, 480–504.
- Sirc, Geoffrey, & Reynolds, Thomas. (April, 1990). The face of collaboration in the networked writing classroom. *Computers and Composition*, 7(Special Issue), 53–69.
- Smit, David W. (1989). Some difficulties with collaborative learning. *Journal of Advanced Composition*, 9, 45–58.
- Spinuzzi, Clay, Bowie, Jennifer, Rodgers, Ida, & Li, Xiangyi. (2003). Open systems and citizenship: Designing a departmental web site as an open system. *Computers and Composition*, 20, 168–193.
- Surowiecki, James. (2004). *The wisdom of crowds*. New York: Anchor Books.
- Taylor, Laurie, & Riley, Brendan. (2005). Open source and academia. Retrieved January 23, 2007, from <<http://www.bgsu.edu/cconline/tayloriley/intro.html>>.
- Trimbur, John. (1985). Collaborative learning and teaching writing. In B. W. McClelland & T. R. Donovan (Eds.), *Perspectives on recent research and scholarship in composition* (pp. 87–109). New York: MLA.
- Trimbur, John. (1989). Consensus and difference in collaborative learning. *College English*, 51, 602–616.
- Ulmer, Gregory. (1998). Foreward/forward (into electracy). In T. Taylor & I. Ward (Eds.), *Literacy theory in the age of the Internet* (pp. ix–xiii). New York: Columbia University Press.
- Wasley, Paula. (2006). A new way to grade. The Chronicle of Higher Education Retrieved April 3, 2007, from <<http://chronicle.com/weekly/v52/i27/27a00601.htm>>.
- West, Richard, Waddoups, Greg, & Graham, Charles. (2007). Understanding the experiences of instructors as they adopt a course management system. *Education Technology Research and Development*, 55, 1–26.
- Yohon, Teresa, & Zimmerman, Don. (2006). An exploratory study of adoption of software and hardware by faculty in the liberal arts and sciences. *Technical Writing and Communication*, 36(1), 9–27.
- Zakaria, Fareed. (December 19, 2005). An imperial presidency <Newsweek.com>. Retrieved April 3, 2007, from <<http://www.msnbc.msn.com/id/10416779/site/newsweek/>>.