As Nancy Allen's introductory chapter to this volume suggests, images and words cannot be examined devoid of the medium in which they appear. The interpretive history of images and words chronicles the ways in which images have contested traditional textual media such as the academic essay, and words have challenged traditional visual media such as art. With the World Wide Web (WWW), the line between images and words blurs as text becomes graphical art and images become links integral to finding other nodes of the Web site. Jay Bolter and Richard Grusin (1999) argue that the WWW refashions almost all other media from print-based texts to television and video (p. 197). Hypertext theorists, too, have urged us to understand how hypertext refigures our literate practices (Bolter 1991; Johnson-Eilola 1993, 1994, 1997a; Joyce 1995; Moulthrop 1991; Moulthrop and Kaplan 1994; Selber 1997). Still other computer composition theorists have explored areas of images and words from the iconographic metaphors of the graphic user interface (GUI), word-processing software, and Web graphics to the textual interpretations of listservs and chatspaces (Hawisher and Sullivan 1999; Johnson-Eilola 1997b; Johnson-Eilola and Selber 1996; Romano 1993, 1999; Selfe and Selfe 1994; Takayoshi 1994, 1999). Many of these works attend not merely to the technical structures of these electronic media, but also to their ideological impact.
These critical engagements on media also present a way for us as educators and Web designers to consider our own Web pages. In his discussion of images and words and their meaning, Gunther Kress (1999) emphasizes the designer's role as "meaning" maker and thus his or her responsibility in shaping our social and cultural environment (p. 87). In other words, rather than exclusively focusing on design elements or users as separate from ideological concerns, to be socially responsible designers we must explore contextualized versions of our pages and thus produce Web documents that are not only functionally sound but also ideologically aware. In my discussion, I seek to connect the ideological implications of images and words and their position in relationship to other aspects of the Web medium in order to understand the roles of Web designers and users.

To begin questioning the demands presented by the discourses on Web technology and the medium itself, I will focus my exploration on one of these constituencies-the corporation. By interrogating corporatization as a set of operations, we as educators and Web designers can better determine how corporate constructions affect and inform our teaching of and authoring on the Web. Here, I am using "corporatization" to mean the possible effects of corporate Web-design practices and standards on other areas of Web design, including academic Web pages, home pages, or other Web sites.

In this chapter, I will first posit articulation as a methodology for interrogating the discourses of and on the Web. Through articulation of Union Pacific Corporation's Web site, I will operationalize a definition of corporatization. Finally, using this definition, I will illustrate articulation through my own pedagogical materials created for a technical writing course taught during the fall of 1998 at Purdue University. This exploratory process is not to advocate a universalized method for teaching Web research, authoring, and reading, but rather to propose a rearticulated approach to teaching and working with the Web.

Complicating the Corporate/Academic Split

Before outlining my methodology, I want to acknowledge an issue with the term corporatization. Within academic settings, corporations often are seen as remote to academic pursuits and goals. Traditionally, within college and university settings, knowledge creation and intellectual development are not fostered for the profit of a corporation or even corporate interests. Further, many academics avoid all business models and references in relationship to their roles as scholars. As Lester Faigley (1999) reminds us in his most recent discussion of technology and education, the academy cannot be positioned as being outside or even beyond all connections to economic systems or their various entities (p. 132). Research grants, scholarships, and even scholarly conferences often are funded in part or whole by corporate endowments. Sometimes this support is a gift and other times it is a partnership between the corporate entity and the university community. My claim is not that these interrelationships are inherently negative or that they should be avoided to retain a sense of "pure" scholarship. To the contrary, my hope is to outline my methodology and then to enact that methodology in order to understand the ways in which corporate institutions interact with academic ones in material and figural ways, and to consider how such interactions relate to pedagogies of the Web.

I will be using the term corporatization, defined as: the standards and assumptions by which various corporate entities develop goals and ideals for what it means to be successful in the marketplace. While this definition does not prevent all complications in discussing corporate and academic relationships, it highlights my desire to focus on the enactment of certain corporate practices. These practices, however, are dynamic and cannot be fixed by a strict set of terms.

Constructing Articulation Theory as Methodology

A critical methodology designed to address the partial and dynamic nature of experience must be more than merely a set of techniques. Jim Porter and Patricia Sullivan (1997) suggest that methodology is rhetorical (p. 11). A researcher's methods are infused by his or her interpretations of social relationships and the context of those relationships. To frame a methodology is to foreground the ways in which we position ourselves as researchers in relationship to cultural practices, but this framing also acknowledges how our research projects are shaped by our own interpretations of those practices.

Considering both methodology as situated practice that needs to be foregrounded and the project of questioning and refiguring existing practices and structures of Web authoring and teaching, I believe that articulation theory holds the potential to enact such a methodology. Articulation theory can be understood as a heuristic to interrogate the interrelationships among corporatization, the academy, and the Web as a technology. Articulation seeks to contextualize a set of terms rather than to create an universalized definition. Such a process temporarily connects otherwise unrelated ideas and concepts to allow us to enact both critical analysis and critical reconstruction of the relationships among those ideas and concepts.

While articulation's reliance on temporal, nonnecessary connections makes it difficult to assert a simple definition, it can be defined in relationship to certain elements that are vital throughout the works of scholars practicing and theorizing articulation. These elements include an emphasis on ideology; a claim to dynamic, contingent, and multiple practices...
and structures; an acknowledgment of difference as integral to understanding those practices and structures; and a call for political imperatives. Although these elements are not exhaustive, most of the theoretical approaches and practical applications of articulation highlight them, because they complement articulation theory’s grounding in cultural-studies commitments. Articulation theory originates with the work of cultural-studies scholars who have sought a means to combat essentialist and reductivist conceptions of Marxian theory to posit a framework for analyzing and reworking specific, contextualized power relations (Grossberg 1992; Hall 1985, 1986, 1989; Laclau 1977; Laclau and Mouffe 1985; Slack 1989, 1996). These power relations are not simply an aspect of a particular context; rather all contexts can be explored to make visible the otherwise normalized subordinate and dominant positions of their given situations. In turn, each situation becomes a staging point to reframe relations that are more equitable and to inquire into the ways cultural practices come to stand for certain cultural norms or structures. My contention is that in conceiving of articulation in methodological terms, we, as educators and Web designers, can make important connections between our work and corporatization. We can reflect on the ways in which corporatization informs our roles as scholars and educators and how corporate images and words relate to the images and words of the academy and the Web.

Understanding Corporatization in Practice

To make responsible Web-design choices we must understand the ways in which corporatization constructs Web representations, and how those constructs position us and our work with students and other professionals. Some of us are charged with the job of preparing our students for their careers-area’s in which many of them will bear the responsibility of “managing” other persons. Others of us must produce sound Web-based documents that not only shape but also reflect the goals of our clients. The expectations circulated about work, the role of the corporation, the Web, technology, and education all need to be explored as a set of relationships. Because both teachers and professionals are implicated in a system where corporatization often can be assumed as the invisible standard for Web development and use, we need to make visible these otherwise normalized practices and structures.

My chosen site, Union Pacific Corporation's (UPC) Web site, comes from my own experiences working for Union Pacific Railroad (UPRR), one of UPC’s largest operations. UPC’s Web site does not vary dramatically from other corporate sites in either its content or form. Consequently, this Web site can serve as a good example for applying articulation in order to illustrate a definition of corporatization in relationship to Web-site development and maintenance. Significant to my selection of UPC’s Web site is also this corporation’s role in industrialization and postindustrialization. UPPR’s history is iconicographic in its contribution to westward expansion and even romanization of industrialism. Also, Union Pacific Technologies (UPT), a more recently developed operation that produces transportation-control technologies, can demonstrate the postindustrial, technological developments associated with shifts in our economy. This company’s history affords us a wider perspective on how corporatization changes yet retains commitments to certain assumptions and values. My exploration focuses most prominently upon UPRR and UPT as parts of the larger corporate Web site, and upon the images and words that are used to develop their pages. The selection of UPC’s Web site affords insight into not only corporatization, but also the effects of corporations on persons. Quite apparently, my investment can be traced directly to my former co-workers and others who participate in the functions of the railroad and its maintenance. My interest also extends to the ways in which this corporation is an example of how corporations have shaped, and continue to shape, other persons and institutions through both historical and even current operations.

To articulate UPC’s Web site, we must consider issues of hypertext as a technology that affects content and form. Both the ways in which hypertext is structured and the ways in which text and images support that structure allow for a richer understanding of corporate standards for the Web. In elucidating these interrelationships, I focus on text, images, links, the design of individual nodes and the larger site, and the interactivity of the nodes and the site. These elements of the Web site are not easily divisible, in that images and links are components of the Web-site design just as the content addressed within the Web site relates to the choice of images. These components of Web sites are examined in order to provide insight into how a Web site can enact certain practices and figure certain structures.

As many hypertext theorists have noted, reading a hypertext document differs from reading a print-based text. Through linking, nonlinearity, and nodes, Web readers also can be considered Web writers as they actively “write” the text by choosing certain links to traverse across nodes or Web sites. These connections and the politics of such connections are dynamic and contingent, changing with each new Web reader/writer and even each reading/writing of the Web site. In Andrew Feenberg’s (1991, 21) often-quoted discussion of technology and how it functions, he posits that [technology] is not a thing in the ordinary sense of the term, but an “ambivalent” process of development suspended between different possibilities. This “ambivalence” of technology is distinguished from neutrality by the role it attributes to social values in the design, and not merely the we, of technical systems. On this view, technology is not a destiny but a scene of struggle. It is a social battlefield, or perhaps a better metaphor...
would be a parliament of things on which civilizational alternatives are debated and decided.

The negotiation process involved in being a Web reader/writer and the tensions among the ways in which technology is being designed, implemented, and used can be applied directly to UPC’s Web site, and other Web sites as well.

Exploring Union Pacific’s Web Site

As suggested, articulating UPC’s Web site allows for an operationalized definition of corporatization that can be applied to ways of re-envisioning Web research and authoring for educators and designers. UPC’s starting node adheres to certain corporate conventions in that it emphasizes its corporate history and background, operations, and financial information. Through these various nodes and other sections of the Web site, UPC constructs its corporate image and announces its corporate culture; the political ideals of UPC are elaborated in its Web-site text, and the ideological implications of these ideals also are revealed in the design of its page. (See figure 13.1.)

Some of those ideals reveal a concern with specialized practices rather than concerns for the persons implementing them. The discussion of these practices ignores the agents performing the actions and their experiences, or it renders their experiences as secondary to the goals of a project. For UPC, one project that focused on specialization rather than the agents was westward expansion, which UPC (1999a) represents through its careful use of images, words, and links. From UPC’s starting node, a Web reader/writer can choose the link to a “Brief History,” where it states that

In 1868, Andrew J. Russell was commissioned by Union Pacific to photograph its construction crews as they laid ribbons of steel across the plains and through the mountains and valleys of the western territories. This endeavor was the nineteenth-century technological equivalent of the space program a century later. Russell’s pictures are a testament to this breathtaking achievement hailed as “The Great Work of the Age” and to the heritage of Union Pacific. (Union Pacific Corporation 1999b)

Indisputably, UPRR helped to expand the West and commerce within our country. This description of the process as a triumphant engineering marvel, however, elides some of the various complications with specialization: the deemphasis of the effects of specialized processes on those workers who deployed them and a reverence for the technologies that enabled and even recorded them. (Note that the only “named” person in the above quote is the photographer.) In addition, the choice to tell this history rather than portray it through images also masks the human agents.

Figure 13.1: Starting nodes for Union Pacific Corporation (Union Pacific 1999a), Union Pacific Railroad (Union Pacific 1999d), and Union Pacific Technologies (Union Pacific 1999g).
who helped orchestrate the expansion. Thus the corporate entity, UPRR, becomes the sole agent of the narrative.

Later, text within this same node states that

among the men who built the Central Pacific from the West Coast, left, and Union Pacific, right, some returned home to their families, but many stayed with the Railroad to build expanding branch lines. Still others were among the tens of thousands of new settlers who began to carve homes, farms, ranches and eventually new states from the wilderness between the Missouri River and the Pacific Ocean. Union Pacific has been serving the United States ever since, hauling billions of tons of autos, trailer and container traffic, chemicals, coal, grain, lumber, and an almost infinite variety of consumer goods. (Union Pacific Corporation 1999b)

Union Pacific's revelry in its development of the West emphasizes the contributions of certain engineering works. This node also reveals a photograph of the famed completion of the transcontinental railroad (see figure 13.2), but what is stressed in this description and image is the way in which specialized knowledge, as instantiated both then and today through certain technologies, creates a heritage to be valued and a consumer service to trust. The irony of this focus on UPC's ability to produce specialized practices is its deemphasis on the persons who implemented and perfected the practices of UPC's engineering vision. This separation of the specialized knowledge from the workers participating in its implementation is best illustrated by works found in the Web archives of the California State Railroad Museum. There, another of Andrew Russell's photographs of the scene (see figure 13.3) is displayed with the explanation that it is of “the Chinese laborers who were excluded from the larger group pictures” (California State Railroad Museum 1999). Both in written and pictorial form, this version of the history of UPC's contributions privileges the corporation's specialties of engineering and commerce over any discussion of the workers' backgrounds or working conditions while engaging in the development of an engineering marvel that rivals the technologies of the later space program. Rather than mentioning the lives lost, disparate working conditions, or labor and management tensions, this historical account discusses the men as having various opportunities after their experiences building the transcontinental railroad. Rather than providing space in the site for alternative views of this historical development, and thus expressing its commitment to diversity, UP presents a limited—even inaccurate-historical perspective, all of which is achieved by the design of the Web page itself. The images, words, and links help to preserve the corporate history of UP rather than tell the history of the workers of UP.
The concept of specialization depicted by this section and others of the UPC site does not make the corporation corrupt. Obviously, the corporation is representing itself to a specific audience, and it chooses to do so by highlighting its ability to create specialized services that prove invaluable to historical and technological development. Such specialization can be found in a variety of corporations and academic fields, but the importance of considering how such purposes inform our representations and our concepts of ourselves as educators and professionals should be considered when designing Web-based materials. When specialization and emphasis on the tools of specialization prevent us from making connections between our standards and practices and the persons with whom we engage, then we must consider more carefully the potentials of such standards and practices to ignore certain psychological, intellectual, and material effects. As Jennifer Terry and Melodie Calvert (1997) suggest, a privileging of the “tool” concept of technology, where the technological object encompasses the limits of the technology, tends to ignore the relationships among the designers, users, and technological objects (p. 3). In UPC’s brief history, racial difference is elided in favor of a narrative that celebrates the tools of progress—progress of the railroad, commerce, and even men who were claimed to be bettered by their experience in this history-making moment. By including a broader view of the history of the railroad’s development, UPC could emphasize and even celebrate its commitment to issues of diversity now and its future relationships. UPC could then acknowledge to its current employees, customers, investors, and railroad enthusiasts that the company values difference and actively constructs a workplace where prejudice will not be tolerated. Thus by changing the images and words of its Web-based narrative, UPC could, in fact, change the history-making function of its pages.

By choosing two other links from UPC’s starting node, the Web reader/writer can discover UPC’s perceptions of three of its largest operations the UPRR, UPT, and Overnite Transportation (OT). These three operations are overviewed by the corporation in terms of their contributions to the parent corporation and to America. In the link to the profile of UPC and its operations, it is asserted that “Union Pacific Corporation is dedicated to being an industry leader in quality customer service, the most advanced technology, and the highest degree of employee involvement” (Union Pacific Corporation 1999c). The Web reader/writer is given the choice to read/write further about these three holdings. And, based upon the claim of attentiveness to persons, customers, and employees and to technological advances, the reader/writer might expect to find more developed discussions of the human and technological interactions forwarded by the corporation. By choosing any of the links, however, the reader/writer will find the conflation of persons and machines—or more accurately, the absence of persons as agents. In its more extensive discussion of UPRR, UPC stresses the following about this operation:

Union Pacific’s customer responsiveness, highly advanced computer systems, superbly maintained track, powerful, computer-monitored alternating-current locomotives, and versatile freight cars have consistently set industry standards. At the heart of the Railroad’s system is one of America’s most sophisticated communications networks. A central dispatching center in Omaha—the largest in the world—monitors and controls the 1,200 trains operating daily on Union Pacific’s 24-state network.

A unique customer service center in St. Louis handles requests 24 hours a day, seven days a week, via a nationally accessible 800 number. And computers are used to assign cars, direct the assignment of crews, keep track of the progress of shipments, handle all shipping instructions and billing, and provide data for detailed cost analyses among other tasks. In a very real sense, such railroads form an indispensable circulatory system that constantly pumps new life and vitality into the American economy. In the years ahead, Union Pacific Railroad will continue to innovate, to achieve optimum levels of operating efficiency, and to put new technologies to work to maintain the leadership position of its system. (Union Pacific Corporation 1999c)

This extensive quote denotes UPC’s mechanization in that the systems discussed and the inquiries processed are not performed by employees but rather by technologies. The requests processed also are agentless. The description makes it seem as if the processes are carried out by the mechanisms—the technologies—rather than persons, and this mechanization is supported further by the lack of images that depict any agents. The promise to the reader/writer is that this corporation will continue to implement ever-new systems that will perpetuate its dominance.

Strikingly, the persons who were touted as significant in UPC’s “Operations Overview” node are constructed as mere components of the mechanized “circulatory” system that UPC provides to the betterment of all America. This conceptualization is best described by Feenberg’s insight that “[i]f one ignores much of the connections between technology and society, it is no wonder that technology then appears to be self-generating” (Feenberg 1996, 8–9). Here, such a move to construct technology as self-perpetuating and inevitable is critiqued for its unconscious concern for the potential effects that technology has on persons, and that persons have on technology. Critical technological theorists assume that technological systems are made up of persons and machines, and that choices about implementation and design are not inevitable or always necessarily better than existing uses and designs. The lack of UPC’s critical insight into its own positioning of both its employees and even its customers in relationship to its technologies can be related to obscurantism, or the refusal to speculate on traditional methods or practices and even the negation that such speculation could produce any necessary social change (Ferre 1995, 37).

What seems apparent from these two examples in UPC’s Web site is the corporation’s need to be efficient. Even the text-heavy design of the Web page itself illustrates this efficiency, in that text is more expeditiously
loaded by most Web browsers than image tiles. Developing better, faster, more progressive methods and technologies that can enhance the performance of its employees and gain its market share—these goals, as stressed before, are not unique to corporate plans for success.

To demonstrate its need to develop better methods, UPC emphasizes its current and historic contributions to technological development through transportation technologies and the railroad, respectively. From either of the nodes—the "Brief History" or the "Operations Overview"—the Web reader/writer can select a link that leads directly to UPRR's history or to its starting node for UPRR from which he or she could link to UPRR's history section. This history section provides a more substantial history of the transcontinental railroad's development than the history that is given on UPC's page. The connection between them, however, is in the tone of these two histories. In a section of the history provided by UPRR, it suggests that “if the Indians repeatedly attacked without warning, and the UP acted as its own army” (Union Pacific Corporation 1999e). Here, UPRR admits the tension between Native Americans who inhabited the land being territorialized by the railroad and the railroad workers developing the transcontinental line. Later, in this same section, it states that

This history pays homage to the need for efficiency at all costs. The assumption is that the technological and engineering breakthroughs of the railroad take precedence over the lives of the persons, and the bison, who inhabited the land being territorialized. The passive attack on these persons is justified by the assumption that this method was “better” than any other that might have been deployed.

More odd than this historical perspective is the merchandise offered by the railroad. If the Web reader/writer selects the merchandise link provided by UPRR, he or she can purchase photos such as the one shown in figure 13.4 from the UPRR's site.

The Native Americans who survived became “merchandise” for the UPRR (Union Pacific Corporation 1999f). The use of words and images on the history page and the Native American archive of images page demonstrates UPC's equating of persons with profits. The need for efficiency, and even the desire to make profits, are acceptable goals for corporations, but here, technological efficiency and merchandizing provide UPRR with a means to write a glorifying and profitable version of its history. Feenberg (1995) argues that “fetishism of efficiency ignores our ordinary understanding of the concept [of efficiency] which alone is relevant to social decision making” (p. 15). In other words, to calculate the costs involved with technological policies and codes designed to achieve efficiency, we must consider noneconomic values such as quality of life and government and corporate responsibility. These codes and policies, after all, are situated within a cultural context along with the technologies that are being administered.

In relationship to such policies, codes, and values of technological implementation, UPT has developed a software program that will allow corporations to judge the worthiness of their projects. From UPC's stating node, the Web reader/writer can choose a link to UPC's "Productivity Quality Management" node. In this node that explains the software, UPT asks: “Is your software project destined to succeed or doomed to fail?” (Union Pacific Corporation 1999g). Then, based upon the amount of resources channeled to corporate projects, UPT asks why:

Thirty-one percent of those projects get cancelled before completion? Fifty-three percent cost 189 percent of their original estimates? Only 16 percent get completed on time and on budget?* [from Standish Group International, Inc.]. Maybe it's because project managers have never had a tool to measure key metrics related to project success. and maybe it's time to manage expectations and ensure your own success. (Union Pacific Corporation 1999b)

This discussion of faulty and costly projects relates to the need for standard quality practices that can be implemented within a corporation. To
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PQMPlus Highlights

- Easy to “see”
  - provides intuitive interfaces
  - employs rule-based logic (expert system)

- Produces repeatable process
  - forces a standard process
  - provides consistent assessment techniques

- Assesses the risks and value
- Flexible and tunable
- Supports industry standards (IFPUG)

* FIGURE 13.5 *

PQMPlus highlights (Union Pacific Railroad 1999).

gain insight into such practices. UPT has developed “PQMPlus” software to plan and determine which projects are most feasible and cost effective. An image link that explains the benefits of PQMPlus provides some interesting ideas about how standards can be determined by software (Union Pacific Corporation 1999). (See figure 13.5.)

The image reveals that the software is “easy to use” and “intuitive” and has a “rule-based logic,” but it also claims to “force a standard process” and “provide consistent assessment techniques.” Later, the image suggests that the software is both “flexible and tunable” and “supports industry standards.” The coupling of intuitive characteristics that provide flexibility with standard processes and consistent assessment is contradictory; however, the potential contradiction of the individual goals of employees or even companies in relationship to a universalized set of standards is not acknowledged. To the contrary, this software attempts to quantify procedures and processes in terms of standards that also circumscribe the abilities of certain persons or corporations to act.

Inflexibility is further emphasized in the design of the page. The image in effect “fixes” the text of this display. To change the text on this page, the Web designer would have to create an entirely new image. Thus the universality that is advocated by this software diminishes the opportunity for workers and management to negotiate standards in relationship to categories outside the universalized system described. This sense of isolating and quantifying variables in a system where the values are determined by the software engineers and designers of the program can be seen as technical determinism. Social agents must adapt to certain technological imperatives, and thus this decontextualized stance becomes the “foundation” for our actions (Feenberg 1995, 6). Instead of positioning technologies as relating to the persons who design, implement, and even develop new uses (other than those intended by the developers), UPC develops a view of technology as inevitable.

Articulating UPC’s Web site has involved an examination of the content—the text and images of the nodes—and the form—the design of the pages themselves. Other considerations in relationship to this Web site are its self-contained status; from my exploration of the UPC, UPRR, and UPT areas of the Web site, I found no links “outside” the Web site. All links that I traversed were connected to the parent corporation or to its operations. Further, the standards and procedures for the technological development were highlighted in multiple ways, but each time the narrative remained consistently associated with technology as a tool. UPC’s sense of technology, specifically Web development, centers on one or all of the categories of corporatization: specialization, mechanization, efficiency, and standardization. UPC’s sense of technology can best be demonstrated by the image provided (see figure 13.6) (Union Pacific Corporation 1999).

Union Pacific Technologies (Union Pacific Corporation 1999).

The hovering globe is aptly labeled “Union Pacific Technologies,” and the transportation companies of UPC are all leading into the computer terminal of the UP system. These company symbols coalesce to stand for the new manifest destiny of the horizon of technology, where progress and efficiency are highly valued. This image plays into the celebration of technology and its mastering of the global marketplace. Here, the industrial train meets with the postindustrial computer to shake nature into submission.
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The political imperative of this corporation is none less than to be the world leader in the transportation industry. This imperative, as illustrated in this complex image, diminishes the significance of certain practices on persons both directly and indirectly involved in its pursuit of this goal.

Applying Corporatization to Developing Web-Site Materials

Using my definition of corporatization with its emphasis on specialization, mechanization, efficiency, and standardization, I want to consider how such constructions relate to my own Web-based pedagogical materials and their design. Neither technology nor corporatization should be viewed as deterministic screens that disallow agency in relationship to educational or professional practices. In order to understand how certain practices become normalized and are reproduced even in university pedagogies (generally, considered to be “removed” from direct corporate intervention), I want to critique my own pedagogical Web-based materials developed for my fall 1998 technical writing course taught at Purdue University. Unlike UPC’s extensive Web site, I have a much more limited number of nodes and sections within my site: approximately twenty-five nodes and three sections. The technical writing course for which these materials were developed is a junior- or senior-level requirement for many students in the school of technology at Purdue.

At the point at which I designed and published these Web-based technical writing materials I had two years of experience with both technical writing teaching and Web authoring. My Web-based materials for this course are, however, the first Web documents that I had created exclusively for my teaching. While the Professional Writing Program at Purdue requests that all staff members provide at least a Web version of their syllabi, I began to offer additional Web-based assignment materials during this semester, since doing so would allow students the opportunity to access more easily the documents that they would need for their participation in the course, documents that otherwise would be available only through a university-established server mount point. In addressing issues of Web design and development, I do not claim to hold expert status as a professional Web developer, but I do see a connection between the roles of instructors creating and maintaining their own Web resources and the roles of professional Web developers. Both instructors and professionals working in the hypertext medium encounter and contribute to the expectations of how the Web should “serve” their specific constituencies. These expectations are informed by cultural factors that advocate technology’s acceptable uses and are often translated in the words and images of their Web pages.

Part of my own impetus for implementing more Web-based pedagogical materials was in the name of efficiency for students and myself.

Despite my critical engagement with technologies as a part of my own research work, I admit to creating Web-based documents that relate to corporatization. Regardless of my theoretical grounding in critical pedagogy and theory and practical experience in teaching writing rhetorically, I can find many incidences in my own pedagogical materials where I fail to assert my goals of being a critical educator. On the first node of my pedagogical materials (see figure 13.7), I describe the students’ responsibilities in relation to the course technologies by suggesting that “because the exchange of information and materials in this class will be almost entirely electronic, familiarity with certain technologies is crucial for participation and success in the course. Thus by the end of the fit week, you should be able to attend to the responsibilities in the list below. If you need any assistance now or at any point during the semester, please do not hesitate to ask” (Kimme Hea 1999a).
In this description of their technological responsibilities, I provide no rationale to students for how and why the course technologies (listserv, Web-based materials, course mount point, email, etc.) will be useful except as a "required" means for information exchange. Rather than providing a contextualized view of technology, I present these technologies as mere delivery systems that can seriously affect students' "success" in the course. This description sets the precedent that the technologies only affect learning processes in relation to their use value and the effectiveness of such uses. As with UPC's pull toward efficiency, in my own desire to provide a more efficient classroom space, I reduce the technologies of the classroom to devices and tools that if they are not "mastered" can adversely affect students' standings in the course. Instead of reinforcing a deterministic view of classroom technologies, I could have focused on the political and rhetorical choices related to the use of these technologies in the classroom context. Rather than contributing to a normalized view of technology, I could have provided students with contextual information for how and why certain classroom technologies are integral to the course and how using them will affect the classroom dynamics. Thus my choice of terms and the design of this page could have led to critical engagement with technology—one of the goals of the course—rather than mask the possibility for such engagement.

As with UPC's Web site, standardization also can be seen in the design of my assignment pages. In order to create a consistency in the ways in which students engage the materials, I set a structure for the project nodes that allows for linking among particular components of a single project, but none of the projects themselves are linked to one another.

To demonstrate this standardization, I have provided an example node (see figure 13.8) of the design layout used for the nodes of the Web-based client project. This "Oral Progress Report" node is linked to the starting and other component nodes of the "Web Solutions Project" and back to the "Syllabus" node. The design of this node, which closely resembles the electronic versions that are available through the course folder, yields consistency but also universalizes the projects for the course. I could have provided more contextualized cues as to which project students are viewing; for example, one simple addition could have been images as visual cues to particular projects. Instead, the text-heavy design of these nodes privileges a sense that each of the projects is similar in its objectives and criteria; this is not the case. Moreover, the project materials themselves outline objectives and provide some aspects of the purpose of the project and its components, but even these discussions prevent a more connected view of how the individual assignments relate to one another and the overall pedagogical goals of the course. As with UPC's site, the design of these nodes privileges the text-based description versus an image- or icon-driven design. This privileging relies heavily on the misguided assumption that text is inherently more direct, clear, and even professional. Rather than combatting this assumption, however, my Web-based materials advocate this idea.

The concept of specialization also complicates the students' abilities to engage fully with the Web-based materials provided to them. The pedagogical goals for the course, which are provided on the starting node, suggest the focus of the course (Kimme Hea 1999a). The goals of this course are for you to:

- Become a better professional communicator by enhancing your report writing.
- Collaborate with your colleagues.
- Analyze writing situations and respond to them through writing.
- Use the computer as a versatile and powerful writing technology.

These goals illustrate some of the major goals of Purdue's Professional Writing Program. The program offers technical and business writing courses focused on contextualized writing projects that center on rhetorical principles. Rather than presenting traditional genre-based pedagogies,
the program asserts that writing is a complex social act. Students are asked to conceive of writing as part of a situated set of actions and practices that inform and are informed by relationships among persons, standards, technologies, and so on. In my own sections of the technical writing course, students are required to conduct extensive field research—document collection and response, observation and field notes, and interview and interview transcript. Students analyze all of these data components in order to create a written report about how writing functions within their field, and what this functioning might mean for them as professionals.

Because of the complexity of this project, students often are challenged by its demands and frustrated by the research expectations. This frustration can be related to the difference in our disciplinary backgrounds (theirs most likely in technology or engineering, and mine in rhetoric and composition) and to expectations coming out of those different fields. Without totalizing their experiences, I want to suggest that our disciplinary frameworks demand different conceptualizations of processes and products. Many students assume that writing is almost exclusively about a product, so asking them to consider writing as a complex process that relates to persons, technologies, and professions seems odd at best. This tension can be productive if addressed in relationship to the demands of this assignment; however, I do not address it in the materials that I provided to students. In class, I attempt to discuss professionalization in terms of their experiences and mine and to interrogate the similarities and differences in how professional expectations and assumptions are articulated within particular professions. The Web-based materials, however, situate the research aspects of this assignment as “normal” activities that students should be willing to participate in without question. This stance is similar to the view of specialization demonstrated in UPC’s Web site, in that it takes the agents for granted. More specifically, my Web-based description ignores the students’ perceptions of research as it is situated within their professional context, which is somewhat ironic considering that one of the goals of this project is to ask students to determine what counts as knowledge-creation in their fields. The project materials shift attention to the products that students will produce and the process in which they will engage, rather than acknowledging their roles as agents in the knowledge-making process. One simple addition could have been a collaboratively produced resource page with a collection of links to Purdue Web sites that feature students’ majors, and other Web pages related to their fields and future professions.

My Web-based materials also relate to the problematic of mechanization. Within my course Web site, students are offered very few links—one in fact to “outside” Web sites: Purdue’s Professional Writing Program Web site, Purdue’s On-line Writing Lab APA style guide, and the National Highway Traffic Safety Administration (NHTSA). These links are considered resources that students should access either to understand the goals of the course better or to conduct and prepare research components of the course. Despite my awareness that students often construe the course as being about written products rather than processes, the research links that I provide assert that writing can be narrowed to a few “key” resources, a seemingly self-defined process. These resources are the tools to build effective writing. Rather than presenting students with further opportunities to critique Web resources, I have narrowed the process. Ideally, for students to build a more critical view of hypertext resources, I could have provided them with strategies for determining which resources might be best for their projects and for analyzing Web design such as words, images, layout, and links of pages. By directing them to a Professional Writing Program Web site without any additional comment on its content and/or purpose, I am mystifying the ways in which programmatic goals for the course relate to those highlighted in my Web-based syllabus. Based upon the placement of these links, both the research and program processes can be construed as inevitable principles that direct the shape of the class without question.

Additionally, such mechanization is supported through the lack of interactivity provided within my Web-based materials. Other than students’ option to email me, which is a link provided at the bottom of every page, students are not offered other means by which to assert agency. Similar to UPC’s agentless technologies, my Web-based pedagogical materials seem to stand for themselves. These links, which are buried within the standardized form of the assignment materials, do not imply the need to communicate with me about the materials unless students “misunderstand” them. During the fall semester of 1998, none of the forty students, to my knowledge, used these links to email me. Despite the presence of these links, the expectation is that the materials “speak” for themselves without need for critical exploration or even interrogation. I am not suggesting that the classroom context for the course does not complicate the materials provided or that classroom discussions do not highlight more critical inquiry into writing, technology, and professional contexts. Rather, I am stressing that the Web-based pedagogical materials that I provided to the fall 1998 technical writing students presented a sense of containment and universality that does not effectively illustrate the critical focus of my course.

Rearticulating Web-Based Pedagogical Materials

By applying the critical lens of corporatization to my own Web-based materials, I am not suggesting that the design of my Web site and its content are devoid of value. My critique of both UPC’s Web site and my own is not to suggest that educators or professional writers design, implement,
and maintain pages that lack consistency or create a sense of “confusion” for their readers/writers simply to complicate the role of technology in the classroom or to highlight the role of agents in industry. My goal, instead, is to offer a different conceptualization, one that seeks to negotiate a design model that provides information and interactivity, connections and complicated critique, and resources and critical consideration of Web resources.

We must be critical of the Web-design standards that we implement in the development of our pages. Becoming more critical of the design factors that we deploy in the coding of our Web sites is necessary if we are to create Web-based materials that relate to project goals. Many guides, handbooks, and even design tools such as text editors offer little guidance to Web designers, especially educators. These resources often are written for and by corporate designers, and we should consider how the advice provided in them relates to the wider goals of a corporation and to the specific needs of instructors and students. By seeking out Web-design resources that take into account an educator audience, instructors can conceptualize new methods for not merely delivering information to students, but also engaging them in complex learning processes. Similarly, professionals given the responsibility to design and maintain Web pages can seek out ways to represent a more complex relationship between the acts of composing pages and the readers who engage those pages. The potentials for alternative structures and designs of Web pages should encourage us to experiment with issues of content and form.

To shift the emphasis from a standard corporatized model, instructors and professionals should develop Web-based materials that can be user-tested by students and clients. Feedback from these audiences can be incorporated into the form and content of the page. Web-based materials also should provide opportunities for students and clients to contribute to the development of the Web site through links to their own pages, contributory images or links for existing nodes, and suggestions for how the pages can better serve their needs. By making critical inquiry into the technology applicable to the materials and projects that students contribute to the class and clients contribute to the companies, educators and professionals can lessen the sense that technologies function as “tools” and emphasize the cultural aspects of the design, use, and implementation of technologies.

Our classroom and professional discussions of the technology of hypertext also should provide opportunities to complicate technological determinism or obscurantism. In other words, in order to prepare students and consumers to be critical agents of technology, we must be willing to discuss technology in sophisticated ways rather than assume the stance that technologies “teach” themselves. Providing rhetorical education and employing rhetorical principles in terms of design, layout, content, and publishing of Web-based documents would mean asking students and clients to consider the set of human and technological relationships. A shift to a more critical view of technology does not mean, however, that we should ignore all design conventions. Instead, a critical view asks us to create strategies for interaction and interpretation of Web authoring and researching practices that take into account the complexity of design and learning.

Notes

1. Throughout this work, “articulation” and “articulation theory” will be used interchangeably to stand for this theorized practice.
2. Because many of the figures in this chapter are copied from the WWW, they will not reproduce clearly here. The images, with higher visual quality, may be viewed directly on the UPC Web site at <http://www.upcweb.com/>.

References


