This paper presents tips for designing an instructional World Wide Web site, providing illustrations from a site developed using Blackboard's Courseinfo that is used in teaching a college technical writing course. The first section discusses overall site architecture, including working with the right equipment, making the leap to an online delivery method gradually, breaking the curriculum into short instructional units, making each instructional unit task-oriented and assigning a definite outcome, contemplating the "rhythm" of online work for instructor and students, building a firm but simple structure of mini-deadlines into the course, employing alternative delivery methods for Web-unfriendly media, keeping it simple, learning enough HTML to build and manipulate basic pages with graphics, loading pages directly onto the site, and taking an online course. Site efficiency is covered in the second section, including establishing and repeating visual/informational patterns. The third section addresses serving student needs, including telling students what to expect. Building community and fostering enthusiasm/participation are considered in the fourth section, including sending class-wide e-mails weekly and requiring some sort of weekly posting or contact with the site. The final section discusses encouraging reliance on the course site by making the site a "one-stop shop." (MES)
Building a Supportive Online Instructional Environment for Reluctant, Apprehensive, and/or Under-Prepared Learners

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ABSTRACT

Focus is on designing supportive and self-explanatory sites. Presenter’s software of choice is Blackboard’s Courseinfo. Student-centered site architecture eliminates confusion and frustration. Planning for student needs, fostering community, and encouraging reliance on the site eases student reluctance to engage the medium and work effectively within it. Points are illustrated with a site created using Blackboard's Courseinfo software. Topics:

Site Architecture: design features of effective sites
Site efficiency: Use of linking & repetition to achieve clarity & coherence
Serving student needs: Tricks for anticipating & serving student needs
Building community: Fostering enthusiasm, participation
Reliance: Encouraging reliance on the course site
I will discuss the topics listed below while providing illustrations from a Courseinfo site I use in the teaching of English 121: Technical Writing. This "paper" is not written in standard discursive format but is presented as an annotated listing of points to consider when designing an instructional site. The topics discussed are as follows:

1. Overall site architecture
2. Site Efficiency
3. Serving Student Needs
4. Building Community
5. Encouraging Reliance

Designing an instructional site for the first (or even the second) time can feel like an overwhelming task. Site design requires an instructor to take many factors into consideration and to learn many new skills. To ease the anxiety instructors often feel when faced with the complexity of designing an instructional site, I have ranked the points made in descending order of importance or urgency. Those considerations or tasks an instructor must take into consideration or achieve from the outset are presented first within each section. Those items an instructor can regard as goals to be achieved at a comfortable pace are listed last.

OVERALL SITE ARCHITECTURE

Work with the right equipment. A 14-inch monitor will blind you. (I went through 2 contact upgrades before I learned this!) If you can count to 100 before PhotoShop loads, get a faster machine.

Internalize the fact that the web site is NOT the face-2-face classroom. This means making an effort to avoid thinking of this new online media in terms of the old media it resembles or replaces. The traditional media of teaching are print and lecture.

However, simply loading printed material onto a web site does not constitute effective online teaching. Do not build instructional units on the assumption that students will remain on the site and read documents of even moderate length. Also, the online environment does not offer you the captive audience that a lecture setting offers. You may be able to create coherence or foster interest in a topic in the classroom by sheer dint of personality, but online, you must rely upon the design of your instructional units and the manner in which the material is presented and integrated to foster interest and ensure engagement.

Lastly, the computer monitor most resembles the familiar medium of television; however, mimicking characteristics of this medium in the display or design of your site will engender a "television" response in your students. An instructional site, in other words, is not and should not resemble a television show. Colors and graphics may create a lively and appealing visual interface, yet over-reliance on animations, film clips, et cetera, may evoke a passive, "wow, cool" response in
students and not genuine intellectual engagement.

To avoid repeating the lecture, print or "show" method of delivery in your instructional site, become aware of both your teaching style and your learning style. An awareness of your own and alternate teaching and learning styles will enable you to exploit the strengths and to avoid the weaknesses of each style. An excellent online resource for diagnosing your own teaching and learning style is provided by the Center for Teaching and Learning at Indiana State University http://web.indstate.edu/ctl/styles/tstyle.html

Leave the classroom on the installment plan—if possible. If at all possible, design and teach web-assisted, semi-online, or web-intensive classes before making the leap to an entirely online method of delivery. If you need support in convincing your administration of the wisdom of retaining face-2-face contact in the teaching of undergraduates, consult the recent study released by the University of Indiana (online at http://www.vpaa.uiillinois.edu/tid/report/tid_report.html). This year-long, multi-campus, cross-disciplinary study endorses the use of fully online methods of instruction for adult/graduate students but questions the effectiveness of the same for traditional undergraduates.

Divide & conquer the 10- or 15-week beast by breaking the curriculum into short instructional units. I kid you not when I say that this will save your sanity—and your students’ sanity!

Plan the overall design of your class by following this procedure:

1. Gather up and account for the sum total of information, concepts and skills you want your students to possess by the end of your class.
2. Break this sum total down into very small "instructional units" (defined in the next point, below).
3. Deliver your course material in terms of these very small and product-oriented "units."
4. When in doubt, err on the side of making a given unit too small rather than too large.

Make each instructional unit task oriented and assign it a definite outcome. The idea is not to turn you into a bean counter but to keep you and your students sane. To launch amorphous, open-ended projects, you need mature, motivated students, and you, yourself, must be practiced at orchestrating large open-ended projects. Save such projects for later, and start with a series of instructional units that involve, say a brief reading, a bit of independent research or thinking, and some task that produces a "product" that will be submitted to the coursesite in some fashion.

1 Instructional Unit = 1 concept + 1 or 2 reading(s) + 1 task + 1 product

Working with small instructional units will help you to keep straight all the various submissions of work you receive from students—each of whom is working on his or
her own timetable.

**Contemplate the "Rhythm" of online work for you and your students and define an average "instructional lifecycle" you are comfortable with.** The "instructional lifecycle" can be defined as the time it takes for an assignment to play out from start to finish in an online, asynchronous environment. I find it to be about two weeks and to involve the following stages:

1. I post an assignment on the site.
2. All students "receive" the assignment.
3. All students execute the assignment.
4. All students submit or post the product of their work.
5. I retrieve all student work.
6. I "process" all student work and post my response or feedback to the site.
7. All students avail themselves of the response and achieve closure on the instructional unit.

The trick is that you may have as many work schedules to accommodate as you have students. Moreover, you will have multiple instructional units playing themselves out simultaneously. Orchestrating this may be as difficult as getting a large group to sing a song in rounds. Having short, well defined, and product-oriented instructional units will help you to avoid chaos.

**Build a firm but very simple structure of mini-deadlines into the course.** Giving your students the entire quarter or semester to complete their work is asking for trouble and setting your students up for failure. You do not rob students of the flexibility of asynchronous learning by placing 3 or 4 "benchmark" points in the curriculum by which students need to have completed a defined percentage of the work. Professors who give their online students complete freedom have high attrition rates in their classes.

**Employ alternative delivery methods for web-unfriendly media.** Students simply will not read long passages of text online. Period. Write your "copy" for a site page then find some way to make it about 50% shorter. Online reading is vastly different from reading offline. If you have long handouts, post them but tell students the material is available in their digital drop boxes, on diskette / CD-Rom, on the campus server in a read-only folder, or even available for pickup in paper form.

**Keep it simple.** Until you are practiced at online teaching, do not plan any large collaborative online projects, instructional units involving 3 or more students to perform a task in unison or even on time, group grading, or elaborate peer-review schemes.

**Learn enough HTML to build and manipulate basic pages with graphics.** Also, learn to use a simple straight-HTML authoring software, such as HomeSite + Dreamweaver (or even just FrontPage and Netscape Composer) as a timesaving
way of creating attractive pages. You can use your skills to create an attractive animated course banner and to spruce up all aspects of the site with graphics and eye-pleasing formatting.

Load pages directly onto the site. Loading pages directly means that a student will be able to view the page / folder content directly in a frame without having that space further constrained by some sort of viewer or program—such as Word or Acrobat. By loading all your course content as word files to which students link, you force students to click through additional layers and you convey the attitude that the instructional site is nothing more than a glorified document dump.

Take an online course. In fact, take several! You will learn from the good ones what works & from the bad ones what to avoid doing in your own classes

SITE EFFICIENCY

Establish & repeat visual / informational patterns. This means situating like information in like places and establishing a visual and informational "style" for various types of site content. For instance, a "Task Summary" might have its own distinctive design (color, graphic, font style) and be located predictable spot (at the top of every instructional unit folder) and follow a predictable pattern of information feed (a list of readings, followed by a list of tasks, for instance). In short, create patterns with color, signature graphics, location, font and content in order to reinforce the nature of a site feature and to assist students in identifying a given site feature.

Craft predictive & descriptive titles. Time spent in crafting precise and predictive titles for instructional units, folders, documents, et cetera, is time well spent. Short may be elegant but ambiguous. Never forget to compensate for the fact that you already know precisely what you mean!

Plan for a "deep" site. Create several layers of folders before displaying content directly on the screen. Design your site to be "scalable" by designing in several layers from the beginning—even if you don't have the content to fill them at first. A "deep" site makes it possible to display all the options or choices contained in a given layer without scrolling down.

Repeat the structure of your site in your backup-folder system. It is a given that you need to keep current backups of every page you upload to an instructional site! Establishing a folder system that mimics the sections and sub-sections of your site will help you to locate page backups.

Make instructional units one-stop shops. (See "linking" under Serving Student Needs)

Edit and re-edit all instructions/directions until they are ultra short and ultra clear. I am a technical writer and even I find this a constant challenge. You will find that there are as many ways to misinterpret instructions you write as there are students doing the interpreting! Remain aware that you have but one shot at conveying instructions clearly and that online you quickly reach the point of "less is more." This means that more language quickly results in less clarity. Use short sentences and simple language. Also, when students explain why a given assignment or passage is confusing, take notes and fix the offending passage!
Avoid dates everywhere except in the syllabus & in announcements. Do not date your instructional units. You may need to change course or otherwise adjust the syllabus midway through the class, and changing the labels on the instructional folders or units will confuse everyone.

Count on the technology to fail. Do this because it WILL fail at some point. Prepare a folder for each instructional unit into which you place photocopy-ready printouts of everything you or your students need from the coursesite. Build some grace time into all deadlines, and have five or six well-publicized means by which students may submit work to you. These means may include the following: Discussion Board posting; Digital Dropbox; file attachment to an e-mail; fax; U.S. postal service; on-campus mailbox; drop spot, such as under your door; on-campus meetings, by arrangement.

Put your e-mail link into every document containing instructions. Accompany this link with an invitation to ask questions or seek clarification. Often, you can turn your response to one student into an opportunity to e-mail the entire class with useful information. Remember, that frequent class-wide e-mails are a powerful means to foster a sense of community online.

Build document templates for standard "site features." This is easy to do, for instance, in Dreamweaver. Using page templates will help you to achieve the repetition of information and design patterns described above.

SERVING STUDENT NEEDS

Tell students what to expect. Create an introductory module or unit in which you discuss the challenges, benefits, advantages, and pitfalls of learning online. Create (and review during any initial face-2-face meeting you may have) a basic skills list for working effectively online.

Give students a hardcopy of EXPLICIT initial directions. These directions should cover everything they need to do or know during the first week of class. Mail it to them if necessary.

Use internal linking. You may not feel comfortable at first with writing the HTML needed to insert internal links, but place this on your "list of goals." (Many authoring softwares automate this task.) If you can handle simple HTML, enrich your site with internal links. For instance, link every assignment line on your syllabus to the files or folders needed in that assignment. After any mention of a resource on the site (or elsewhere) insert a link to that resource. Students will feel as if they always have at the ready whatever they need.

Create a generic logon. Know that each term one or more students will forget their logons and/or passwords. Don't risk loosing a student because he or she could not access the site to let you know that he or she could not access the site! If you do not have enrollment capabilities, get your online administrator to create a generic "jane doe" logon.

Access your site and test advanced features from select computers across campus and from computers off campus. Just because your site runs smoothly from your desktop computer doesn't mean it runs smoothly on the computers in student labs or on the computer in the local public library. You may be shocked to discover that some content times out when squeezed over a 56K modem or that load times are too excessive to be practical. Also access your site from the "other"
platform and "both" browsers. Don't wait until you have built your entire site to discover display problems.

Write your own simple directions for performing basic site tasks. Students may have access to an online manual, but this does not mean they will consult it. When asking students to utilize a site feature, such as the Discussion Board, the Chat, or a Digital Dropbox, include in the instructional unit folder directions for how to negotiate the software. Another option is to link to pertinent sections of the online manual or to other WWW resources.

Provide multiple sources of critical materials. Place digital copies of all site documents in student drop boxes and a read-only folder on the campus SERVER. Also make them available on disks and/or CD-ROMs that you place on library reserve. Utilize whatever resources you have to ensure that your students will never be unable to access crucial course materials.

Get an alternate (non-campus-server-dependent) e-mail account. I am sure the server never crashes at your institution! Nonetheless, make sure you can send and receive messages even if the unlikely occurs. Also, set your e-mail to "auto-respond" when you are truly unavailable.

Provide many ways for students to submit work to you. In many ways the business model prevails in the world of online instruction: make it as easy as possible for your "customer" to do what you want him to do. Examples of means by which a student can submit work are as follows: Discussion Board; Digital Dropbox; file attachment—to an inside & outside e-mail account; fax; U.S. postal service; on-campus mailbox; drop spot, such as under your door; and on-campus meetings, by arrangement.

PACK your external links section. Make as many resources available to your students as possible. Provide resources on topics related to the content of your course. Doing so establishes an ethos of curiosity and exploration.

Forget on-line office hours, but live on your e-mail. One of the most powerful things you can do to make students feel supported is to talk to them. Try it—regularly—and you will discover the most amazing thing: they will talk to you as well!

Give realistic deadlines. Just because you can access the site readily from your desktop does not mean that all your students can do the same. I began with a posting deadline of 9 hours before face-2-face meetings. The 9 became 6. Now I take postings as close to the wire as I can manage!

Educate support & IT personnel about your students' needs. Also, be prepared to run interference for them if they have trouble getting the technical support they need.

Scope out the fast computers on campus. Then tell your students where to find them and/or when they are available. Give them links to the online manual.

Provide plug-ins & software. Blackboard maintains a nice library of plugins. Link to it from your site at http://company.blackboard.com/Support/CourseInfoStudent/plug-ins.html

Replace links to support documents on external sites with full-text documents of your own making.

Create your own tutorials.
Kate's Bottom-Line Advice List for Getting Started

Create your own self-tests to support your tutorials.

Get funding for a Supplemental Instructor or Lab Assistant.

BUILDING COMMUNITY: FOSTERING ENTHUSIASM, PARTICIPATION

Send class-wide e-mails weekly.

Require some sort of weekly posting or contact with the site. Build this into your course requirements. Once a student has lost contact with the class for a week, that week is more likely to turn into two — then three. "Class feel" grows cold quickly and must be fostered assiduously. If you have face-2-face meetings, bring marked-up printouts to class meetings and comment on them (i.e., offer praise & encouragement) publicly.

Post updates and/or reminders two or three times a week. Make sure that you have some sort of new content on your "splash" page every few days. Students may assume that nothing is "happening" in the class if nothing appears to change from week to week. The opposite, of course, is also true.

Keep instructional units product-centered but make products small / achievable. Set your students up for success. This is particularly important during the first few weeks of the class.

Post student work with comments to the site. Then place a linked announcement of the same on the "splash" page.

Have students RESPOND (with quotes!) to the postings of others. Wait until you have your online "sea legs" to do this, but keep it in mind as a powerful means of encouraging a class esprit de corps.

Use collaborative groups (no more than three!). The online classes with the strongest sense of community employ some form of collaborative learning. Managing these projects requires skill, but the skill is well worth developing. Have each group select a group "Leader." Have students generate a class activity (for instance, by formulating questions for the Discussion Board) and moderate the ensuing activity.

Create and use thumbnail graphics of your students. If you have student homepages or if you can take digital snapshots of your students during an initial meeting, create a library of thumbnails that you can insert into e-mails and chats to put a "human face" on online interactions.

ENCOURAGING RELIANCE ON THE COURSE SITE

Make your site a one-stop shop. If your students need it, make sure it is on the site or reachable via the site — preferably via linking.

Test every site feature you add. Then go back three months later, and test each feature again. Nothing will lower a student's confidence in and reliance on the site faster than dead links.
Have all course material up there to preview & to review.

Put student SCORES on site—even in a basic table.

Provide samples of completed assignments.

Jettison the text. Link (with permission) to online texts or to sites that provide the same information. When needed, fill out the resource with documents of your own. However you achieve a text-free class, the effect will be the same: students will rely on the site.

Provide representative self-tests.

Build a rich site & keep it up to date.

Make a "game" of extra credit. If you can obtain a bit of "personal" space on your institution's online server, you can do all sorts of fun things. You can hide extra credit assignments deep in the "additional resources" corners of the site and reward students for finding and completing them. This may sound juvenile, but I find that students love hunting out these assignments. Your goal, of course, is to have them do the supplemental reading, thinking, and learning.
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