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Special Report

Online Course Design:
13 Strategies for Teaching in a Web-based Distance Learning Environment

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IDEAS FOR EFFECTIVE ONLINE INSTRUCTION

Online Course Design: 13 Strategies for Teaching in a Web-based Distance Learning Environment

After years of teaching face to face, many instructors are able to begin teaching a traditional, classroom-based course without having the entire course laid out ahead of time. This approach doesn't work very well in the online classroom where careful planning and course design is crucial to student success.

Good online course design begins with a clear understanding of specific learning outcomes and ways to engage students, while creating activities that allow students to take some control of their learning. It also requires a little extra effort upfront to minimize two of the most common frustrations of online learning: 1. confusing course organization (how course elements are structured within the course) and 2. unclear navigation (what links or buttons are used to access these elements).

When learners can't find what they need or are confused about where to go and what to do, it is harder for them to learn. Being an online learner is challenging enough without these additional barriers. Plus, frustrated learners tend to either drop out or drive the instructor crazy – neither of which are the outcomes we want.

This *Online Classroom* special report is a collection of articles that address many of the key issues in online course design. Featured articles include:
- Usability Issues that Impact Online Learning
- Subdivided Courses Help Students Learn in Small Increments
- 10 Tips to Extend the Shelf Life of Your Online Course
- Adaptive Hypermedia for Individualized Learning
- Empowering Students to Become Self-Directed, Engaged Learners
- Web-based Video Lecture Courses Meet High Demand, Allow More Learner Control
- A Guide to Creating Modular Courses

Whether you're an experienced online educator or designer looking for fresh ideas, or someone who's just getting started with online classes, this special report gives you proven strategies that you can use right away.

Rob Kelly
Editor
Online Classroom

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10 Tips to Extend the Shelf Life of Your Online Course

By Darren Crone

Building your online course took a tremendous amount of time and effort. You created a syllabus, selected a textbook, wrote learning objectives, recorded lectures, developed learning objects, designed course activities, and carefully planned out your assignments. Once your course was complete, you couldn't help but feel a sense of pride. This magnum opus of binary code was built to stand the test of time and be offered ad infinitum/ad nauseam … right? More than likely the answer is no. Without proper planning and design, a large portion of your course may have to be redeveloped for the next offering. If planned and designed properly, however, an online course can be offered relatively intact from semester to semester. As with traditional courses, online courses will need a change here and a tweak there, but major reconstruction can be largely avoided. This article will present 10 common online course design pitfalls (each experienced by yours truly) and discuss solutions to assist instructional designers and instructors in building a lower-maintenance course.

Problem 1: The publisher short-cycled your textbook.

There was once a time when you could count on a textbook edition to remain current for at least several years. Now, it is not unusual for "new" editions to come out every 24 months. To avoid having to constantly implement a new edition, a custom textbook may be created. Several companies are offering this service, in which the instructor determines the content by integrating sections of existing textbooks, articles, and even original material. This custom textbook is then given a unique ISBN and may be used as long as desired. Other advantages include lower cost and the availability of an electronic version for students.

Problem 2: A course is built using a publisher's content and you change textbooks.

Many textbooks come complete with online course content. With a few clicks of a mouse, an empty shell in Blackboard can be transformed into a dynamic interactive learning environment to accompany your book. Students can access videos, online lectures, practice quizzes, and more. The only drawback is that when you change books, you must also stop using the content. A way to bypass this is to avoid taking the easy path; create your own course content. There are several low-cost and free programs out there to help you accomplish this. While it will be considerably more work up front creating your own lectures, acquiring copyright permission for multimedia materials, and building your own self-quizzes, the extra effort will pay dividends in the long run.

Problem 3: A learning object becomes obsolete.

Learning objects can take a lot of time to create. Before developing an original learning object, you should be relatively certain that it is reusable. For instance, an interactive exercise demonstrating the Pythagorean Theorem is likely to be usable for years to come as the concept does not change, while an interactive world map with detailed information on all countries may become dated shortly after completion. Also, there are a growing number of repositories that offer low-cost or free learning objects for educators.

Problem 4: Your course material is no longer correct/relevant.

By judiciously selecting the medium for getting the information to your students, considerable trouble can be avoided. Instead of creating a multimedia lecture that touches on every detail of a topic, try sticking to the higher-level concepts. This way if something minor changes, the entire lecture does not have to be redone. The details that may be more prone to changing can be addressed in a more dynamic forum, such as on a discussion board, via a Web conference, or in a chat session.

Problem 5: The publisher updates the textbook, changing the order of chapters. The course, which was based on the order of the textbook, is now out of sequence.

During the design of the course, determine the order in which you want the material to be presented. There is no law against presenting Chapter 9 before Chapter 1. Instead of organizing a course by the chapters of a textbook, consider

breaking it into modules based on topics. This way if the publisher pulls the old switcheroo, all you need to do is change the reading assignments in your syllabus (as opposed to reorganizing your entire course). It should be noted that if you are using a custom textbook, this is a nonissue.

Problem 6: Your textbook was updated, and page numbers/figures referenced in course materials do not match up with the textbook.

It is recommended that specific page numbers and figures not be referenced in course materials that are expected to be reused. Try creating your own examples, or if a specific page/figure must be referenced, consider doing this on the discussion board.

Problem 7: Your contact information or course software requirements are out of date.

There are some things that will always change. Consider using your syllabus to communicate your office hours and contact information for instructors and teaching assistants in the course. Isolating information that is likely to change makes it much easier to keep track of. For information that will be included in multiple courses, such as software requirements, consider creating a Web page and adding a link to it in each course's syllabus.

Problem 8: You have broken hyperlinks.

There is a tremendous amount of useful information on the Web, but you are taking a risk when linking to any site outside your course. The possibility exists that the information will be moved or deleted. Whenever possible, keep your course materials (videos, case studies, self-assessments, etc.) inside your course management system. When you must link to an external page, consider providing the link on the discussion board.

Problem 9: Your academic institution has upgraded/changed its learning management system (LMS).

When switching to a new LMS, courses must be moved. Many times this is a painful and laborious process. To avoid having to reconstruct your course file by file, consider developing your course as a package file. To do this you should create an HTML page linking all course materials inside a folder. The folder can then be zipped, uploaded, and unzipped into any LMS.

Problem 10: Academic integrity issues prompt the creation of new tests.

Instead of creating a single test for all students to take, consider using a large test bank. Test settings can be adjusted so each student receives a different test with all questions and answers randomized.

This article reviewed some common issues that are encountered in online course development. Developing an online course is a lot of work. A little preplanning will help to ensure that you don't have to start from scratch each time the course is offered. @

Subdivided Courses Help Students Learn in Small Increments

By Rob Kelly

Many online learners do not have large, uninterrupted blocks of time to dedicate to their coursework, which is why Robin Smith, senior WebCT certified trainer and Web-based learning coordinator in the Office of Educational Development at the University of Arkansas for Medical Sciences, recommends that instructors subdivide their courses into manageable segments so that students can complete small learning activities in their spare moments.

"When teaching online, we are no longer dealing with students who are surrounded by other students who are thinking about the same thing at the same time in a protected, one-

hour environment dedicated to a subject. Now students are surrounded by all these interruptions that don't have anything to do with [the course]. We all have lots of things competing for our attention. If we provide students with short segments that can be reinforced quickly, then the students know they can go online, grasp something from a 10- or 15-minute segment and move on so that they can fit learning into their everyday lives," Smith says.

Smith recommends a model that features a passive-learning segment (perhaps a brief narrated PowerPoint presentation) followed by a related active-learning exercise that reinforces the concept, such as a self test, review questions, or short quiz. By offering a small standalone chunk of learning in this manner, students become accustomed to the pattern of alternating passive and active learning and are likely to log in more frequently because they don't need to commit a substantial amount of time in a single session. Students can process this concept while they are going about other activities of their day and later come back for another learning concept. And, Smith says, when students log in more frequently, they are also more like to participate in threaded discussions, which helps build the learning community.

Part of establishing the design pattern is informing students how long it will take them to complete each chunk of the course, which can be important for students with busy schedules. Noting the time of the narration to the side of each presentation is easy to do and very helpful for the students. Smith says, "You understand the importance of this if you've ever been "held hostage" by a video presentation or a tutorial you expected to be able to complete in 30 minutes and 40-45 minutes later you

were still not finished!"

Also, when designing a course, remember that it may take students more time to complete a chunk than the actual time of the presentation because they may pause a presentation to take notes or replay a certain section. In one of her colleague's courses, it takes student three times longer to complete a chunk than is listed on the presentation, so it would help students to let them know that the time each of them will need to complete the chunk may be significantly more than the presentation time would indicate.

By recording the audio individually for each slide, students are able to review the presentations as often as needed and even skip slides that address concepts they are familiar with as their studying progresses.

"Sometimes when we record narration we suddenly become more formal and less natural about the ebb and flow of a normal lecture, this chunking helps return those natural breaks to the presentations. I think the easiest thing to do is have the presentation and then come back and create those transitions because sometimes it's difficult for people to envision the chunks," Smith says.

In helping instructors identify these chunks as natural places to break, Smith asks them to consider the transitions they automatically insert into their face-to-face lectures, such as when one asks students questions or explains a point and announces that the class will now move on to the next point.

The way in which an instructor subdivides his or her lecture depends on the content. If it's a history lecture, it can be subdivided chronologically or by event. A lecture in an English course might be divided according to parts of speech.

In addition, when a presentation needs to be updated, an instructor will be more likely to make changes

Suggestions for chunking:
- Find the natural break points in presentations and create transition slides.
- Create an active-learning activity based on the concept introduced in the each chunk.
- Indicate the amount of time it will take for students to go through each chunk.
- Record narration per individual slide to enable students to skip or review individual slides.

Benefits of chunking include:
- Students log in more frequently.
- It helps establish a pattern to the course.
- Allows students to find the time to fit the learning into their busy schedules.
- The course is easier to update.

to a brief presentation than having to redo a longer one, Smith says.

When dividing courses into chunks it's important that students are reminded about how each chunk relates to the overall course goals. Smith accomplishes this by including transition slides at the beginning and end of each chunk that explain where the previous chunk left off and what the current chunk will cover.

Not all students learn best in short sessions. For those who prefer to take in longer presentations, Smith recommends that instructors either provide their presentations in two formats, one consisting of small chunks and one that includes the entire presentation in one file. If creating two formats is too much work, you can remind students that they can view several presentations sequentially in one session. @

Adaptive Hypermedia for Individualized Learning

By Rob Kelly

The online learning environment offers great potential for individualized learning. One way to achieve this is through adaptive hypermedia—using learner use patterns to adapt course presentation, navigation, and content to suit individual students' needs and preferences.

Researchers at Rensselaer Polytechnic Institute have begun looking into ways to use adaptive hypermedia to individualize courses. They developed a course model, known as OctoPlus, which consists of the following eight instructional events, each representing a different instructional method and each linked to a separate Web page:

- **Connect**—engages students' prior knowledge of the content and helps the instructor gauge how much students know about the content. This can include a video or simulation.
- **Reflect**—has students externalize their thoughts on their experiences through a discussion board, e-mail, or response to a quizlike question.
- **Share**—enables students to share their experiences with the whole class, perhaps through a multiple-choice or short-answer question.
- **Learn**—presents the content.
- **Practice**—provides learners with exercises that reinforce the activities in the "learn" section.
- **Personalize**—asks students to reflect on what they have learned.
- **Experiment**—has students take the information they have learned and manipulate it to better understand how the concept works.
- **Apply**—has students apply the learning to new situations.

Using this model to design courses gives students different ways to look at the content. "I think a lot of times when instructors are faced with

> "We found the exact same performance in both groups, but the adaptive group did it in a much shorter period of time."
>
> Michael Danchak

putting their courses online, there aren't a lot of guides for them other than just transferring their lectures into a text-based format," says Linda Polhemus, project manager. "[This model] really sets up a structure for an instructor to go through in creating an experience that will get [students] engaged in the learning objective that is to be reached through the entire cycle."

In a series of experiments, the researchers created modules that used the OctoPlus design and allowed the navigation, presentation, and content to be adapted.

In one experiment, a control group went through the entire cycle sequentially and an adaptive group did not. "We were constantly looking at what these students were doing and how well they were doing and basically trying to give them more of what may help them do better and less of what will get in the way of learning," says Michael Danchak, professor of computer science at RPI. "We found the exact same performance in both groups, but the adaptive group did it in a much shorter period of time. Cautiously we're inferring that [individualization] is more efficient in that maybe we're giving them what they need to be successful in a shorter period of time rather than looking at perhaps a lot of irrelevant or extraneous things."

The researchers tracked student use patterns themselves, which was a very time-consuming process. However, like many interactive websites (e.g., Amazon.com), there is the possibility of creating authoring tools that enable courses to respond to an individual's preferences and performance. Making these tools interoperable among different systems is another issue. (Can these tools be shared among instructors to cut down on work while maintaining the individual instructors' imprints on course design?)

This would be more effective than basing individualization on learning style preferences, because learners are not always accurate in identifying their learning style preferences and because learning style preferences can changes over time, Danchak says.

Alessandro Assis, a graduate student who worked on this study, points out that adapting modules to the students improved efficiency, and that the next step will be to demonstrate whether it can improve learning effectiveness. @

To Plan Good Instruction, Teach to the Test

By Patti Shank, PhD, CPT

Building effective instruction involves multiple tasks, but planning is one of the most critical. For online courses, planning is especially important because even under the best of circumstances, online learners often struggle with understanding what's expected of them; at a distance, they can get unbelievably frustrated (or worse) and stop trying. That's one of the best reasons for using a systematic approach to planning your instruction. One of the best planning strategies for good instruction is teaching to the test. You likely have heard the words "teaching to the test" uttered contemptuously. But it can be a very good thing indeed. I'm going to take a bit of a circuitous route in explaining why so you can understand my logic.

I'm a big believer in writing good learning objectives and good assessments. Objectives are the cornerstone for planning effective instruction, and good assessments determine if the objectives have been met. You might consider these the "bookends" of planning effective instruction.

ADDIE who?

Instructional designers (people who typically have specialized training in using cognitive and other principles to design effective instruction) call the practice of systematically planning instruction "instructional design." There are numerous philosophies of instructional design but all have certain things in common, including following a list of tasks that ensure better end results.

Here is a list of typical instructional planning tasks, in order:
1. Identify learning objectives
2. Design assessments
3. Design content and activities
4. Select media and delivery options
5. Develop the course materials
6. Implement the course
7. Evaluate and revise

If you have worked with instructional designers or read articles or books on instructional design, you may be familiar with the ADDIE model, one of the most common models for the systematic design of instruction. ADDIE is an acronym for Analysis, Design, Development, Implementation, and Evaluation. Following a systematic process such as ADDIE can help prevent some of the typical problems that happen when instruction isn't well planned, including instruction that doesn't seem to have a clear goal; quirky (not in a good way) or deficient course content, activities, and assessments; and poor evaluations for the course and instructor.

Notice that identifying learning objectives is first on the list of tasks. And designing assessments is next, for good reason.

Design assessments after identifying learning objectives

Designing assessments should optimally occur right after identifying learning objectives. That's because assessments should measure if the objectives were met. If the learning objectives are well written, appropriate methods of assessment are generally quite clear.

See TABLE 1 on the next page to how the appropriate assessment matches the learning objective? If you design assessments as an afterthought at the end of designing the instruction (a common but unfortunate mistake), you are likely to design the wrong content and the course activities and the assessments are likely to be far less meaningful or appropriate. In other words, designing the assessment (test) right after identifying the learning objectives 1) makes the needed assessment very obvious and 2) provides clear cues about what content and activities are needed.

Design content and activities after designing assessments

I've finally made my way to telling you to design to the test. First identify the learning objectives and matching assessment (test). The learning objectives should clearly state what the learner should be able to do, and the assessment (test) should measure if they can, in fact, do that. The content and activities should then be designed specifically so that the learner can pass the test, because that means they have met the learning objectives. And that's the goal of effective instruction.

Let's look at TABLE 2 on the next page, once again at the three objectives and matching assessments to see what content and activities make sense.

As you can see, a well-written objective and matching assessment provide pretty clear cues about what content and activities are needed. It makes the instruction not only more effective, but also easier to design. Better instruction and less work. Terrific!

A few more words about activities

Some people ask me whether content plus assessments is enough

for a good online course—for example, PowerPoint slides and tests. Aside from the fact that this would be unengaging for learners, this approach is not instruction. Activities and feedback are needed for instruction. In fact, I'd go so far as to say that the purpose of instructional content is to support instructional activities. Activities allow learners to reflect on and apply the content and make it personally meaningful. When we don't do this, we're likely teaching at only a surface level, preparing learners to do nothing with the content other than forget about it once the test is over. Strong enough words?

Your turn

If activities are the opportunities for learners reflect on and apply the content so that it becomes meaningful to them, now would be a good time for you to do that with the content in this article! See if you can write two good learning objectives and then match assessments and content and activities. Try swapping your work with someone else (another faculty member or maybe even an instructional designer) to get feedback.

Some people think it's hard or even impossible to create meaningful online activities, but that's not so. In fact, an asynchronous online learning environment provides opportunities for activities that would be hard to do in person.

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TABLE 1

If the learning objective is...	A matching assessment could be...
1. Learners will label the parts of the human respiratory system, including the trachea, bronchi, lungs, thoracic cavity, and diaphragm.	Illustration of the human respiratory system prompting learners to label the trachea, bronchi, lungs, thoracic cavity, and diaphragm
2. Learners will demonstrate three elements of a proper phone greeting.	Demonstration(s) of the three elements of a proper phone greeting
3. Learners will use the three-criteria model to evaluate a play.	Verbal or written application of the three-criteria model to evaluate a play

TABLE 2

If the learning objective is...	A matching assessment could be...	Matching content and activities
1. Learners will label the parts of the human respiratory system, including the trachea, bronchi, lungs, thoracic cavity, and diaphragm.	An image of the human respiratory system prompting learners to label the trachea, bronchi, lungs, thoracic cavity, and diaphragm	• Content: Images of the different parts, separately and together • Activity: Practice labeling the parts
2. Learners will demonstrate three elements of a proper phone greeting.	Demonstration(s) of the three elements of a proper phone greeting	• Content: Discussion of the three elements • Content: Examples of the three elements in use • Activity: Practice using the three elements
1. Learners will demonstrate three elements of a proper phone greeting. 2. Learners will use the three-criteria model to evaluate a play.	Verbal or written application of the three-criteria model to evaluate a play	• Content: Discussion of the three-criteria model • Content: Examples of the three-criteria model applied to a variety of plays • Activity: Practice applying the three-criteria model to a variety of plays

Posting Handouts Online Introduced Instructor to Online Learning Possibilities

By Rob Kelly

Like many instructors who venture into the online classroom, Brenda Rambo, assistant professor of psychology at Middle Tennessee State University, began gradually by enhancing her courses with Web content. Her initial motivation was to provide her students with online handouts, which would eliminate the hassle and expense of making photocopies. From this simple beginning, she has progressed to offering user-friendly fully online and hybrid courses that have changed the way she teaches and the way her students learn.

"I decided to build basic websites for all my courses to stop the handouts and to provide the syllabus and reading schedules. The more I did that, the more I was intrigued by how much it benefited the students and how much more of the learning process they could be in control of," Rambo says.

The department had few online courses available to undergraduates, so Rambo decided to create an online version of developmental psychology, a required course for psychology majors. The course proved to be very popular.

What's the reason for the popularity of the course? "Most students work 25 to 35 hours a week. Many work full-time jobs and take full loads. A lot of students also have families, so coming to class is a big inconvenience. They may be very motivated learners, but they need to do it when they can do it. I have found that most of my students who take my online courses say that they love being in charge of their learning, doing it when they have time to do it," Rambo says.

In addition to flexibility, the design of Rambo's courses provides students with an active learning experience. Rambo uses WebCT, but her design goes beyond the basic layout, which makes the courses more user friendly than they would be otherwise. She divides each course into the following sections:

- Course content and related materials—This section includes the syllabus, calendar pop ups, reading schedule, meeting schedule (for hybrid courses), chat group assignments, and case studies.
- Communication tools—This section includes links to e-mail, discussion boards, and chat rooms.
- Study tools—This section includes study sheets that help students prepare for exams and other tools that Rambo has designed to help students study.
- Assignments—This section lists all the assignments with links to assignment requirements, instructions, rubrics, and any forms needed to do the assignment.
- Handouts and forms—This section includes all handouts and forms related to the course.
- Class notes—In this section, Rambo provides course content in several formats, including lecture notes, PowerPoint presentations, and outlines.
- Grades
- Textbook website— "It's important to have a great textbook, but it's also important that the textbook has a great website," Rambo says.
- Quizzes and exams

Unexpected benefit

As Rambo taught her online course, she began offering the same online resources to her face-to-face students. "I didn't require them to take tests online, but they had everything I had—PowerPoint, the textbook website, practice tests—and they could do everything an online student could do, but they had to come to class," Rambo says.

When they have access to the online materials, students tend to come to class more prepared. "They would hold up their hands and say, 'Doctor Rambo, we don't want to hear this because we've already done all this. Let's talk about life. Let's talk about life applications of the concepts in the book.' It changed everything I did that semester because they came to class so prepared and wanted new information," Rambo says.

Based on the success in her Web-enhanced undergraduate course, Rambo has incorporated online learning into a graduate-level prepracticum course. That class meets every other week, and during the weeks the class does not meet, students participate in threaded discussions.

By moving discussions online, Rambo has been able to concentrate on developing students' counseling skills. "Because we have had such intense personal discussions about all the course contents online, when we go to class I can demonstrate everything from the book. Before, all I had time to do was lecture on the content of the book. I didn't have time to demonstrate. Now I have time to do face-to-face counseling for three- to five-minute segments with every student and debrief what happened." @

Empowering Students to Become Self-Directed, Engaged Learners

By Rob Kelly

Course design is crucial to student success. It should reflect the intended learning outcomes and provide enough guidance for students to easily navigate the course without being overly rigid so as to stifle the exploratory aspects of learning, says Mary Hricko, library director and associate professor of library and media services at Kent State University Geauga Campus and Twinsburg Center.

Good course design begins with a clear understanding of specific learning outcomes and ways to engage students. "Simply putting content on the Web is not instruction," Hricko says. "I've seen instructors put their post their lecture and text on the course site for student to read, but what they really need to do is think about interactivity."

For example, rather than posting a linear lecture, an instructor might consider including embedded links to give students the opportunities to explore certain topics more deeply if they choose to. "There should be some areas of the site that the students can [manipulate] for improving their retention of the instruction," Hricko says. "Sometimes students have to manipulate information so they can learn it better. There should be some facets of the site that allow them to do that."

Depending on the intended learning outcomes, this interactivity can extend beyond embedded links. Hricko recommends creating activities that allow students to take some control of their learning. This could include having students:

- add content to the course website,
- take turns creating course lectures,
- submit Web links related to the course material and explain their relevance,
- add questions to a test bank,
- take pre- and post-module assessments to determine whether they have mastered the learning in that module,
- moderate online discussions,
- fill in the blank slides to an incomplete PowerPoint presentation or lecture outline in preparation for a lecture,
- monitor several blogs and use material from those blogs to generate discussion, and
- create their own blogs on a topic related to the course.

"If our goal is to generate thinkers and individuals who assimilate knowledge, then we have to involve them in activities that give them the freedom to do that. Simply feeding them the information does not really facilitate their abilities to learn those skills. That's not teaching. That's not empowering our students. When students are given the opportunity to participate in the instruction, they gain confidence with themselves and the pedagogy," Hricko says.

In addition, students can add different perspectives to the course. "A lot of times the students see the content from a perspective that an instructor would not, and may offer new insights into the content that the instructor did not consider. I fervently believe that we can learn a great deal from many of our students. It's important that we show value in their perspectives and by allowing them the opportunity to contribute to that body of knowledge, I believe that it demonstrates to students that we are genuinely interested in what they are thinking about," Hricko says.

Despite the fact that many students, particularly millennial, are used to interacting via technology, they are generally not very well prepared for online education that puts the learner in control of much of their learning. "I think it's a bad assumption that because students are millennial learners that they have an understanding of how to manipulate technology to learn. Social technologies are different than educational technologies. Sure, they can multitask, but when it comes to understanding some of the ways in which the expectations of learning and contributing we still have to address those basic skills—research ethics, how to present information, and how to use technology appropriately. We need to make certain that students understand the different tools in the online environment and what is expected [of] them in online discussions and completing assignments," Hricko says.

Course design can help students embrace this new way of learning. Most institutions have online resources, such as a technology help desk and an online library, to help students. However, it is up to the

course designer to help make these resources easy to access. "All [course] sites should have access to the virtual library," Hricko says. "Likewise, if students are required to turn in papers online, [the course site] should have a link to the online writing lab. When you're [designing] your course, you should have these resources linked to the course to take away some of the questions that you as the instructor might not want to always deal with. When students see what's available to them, they will make use of it."

In addition to designing courses with links to these resources, Hricko says that institutions should do a better job of preparing students for the online classroom before they enroll in an online course by incorporating online learning workshops into freshmen orientation.

Hricko also recommends that instructors provide students with orientation packets for their courses—to explain the parameters of their courses and how to use the technology—and should give those packets to academic advisors and librarians as well so that they can better serve the students. @

Web-based Video Lecture Courses Meet High Demand, Allow More Learner Control

By Rob Kelly

In an effort to accommodate increasing student enrollment without having to expand its physical campus, the University of Ontario at Scarborough has begun offering some of its high-enrollment, lecture-based courses via Web-delivered video lectures.

This approach, known as WebOption, began in 2003, to accommodate the increased enrollments that resulted from the elimination of the fifth year of high school in the province of Ontario.

That summer, the psychology department offered its usual three sections of face-to-face introduction to psychology and an additional online section that used Web-delivered video recordings of the face-to-face lectures. From the beginning, students had the option to attend class in person or view the same recorded lectures online. "These students showed an immediate appetite for online lectures and vacated seats in huge proportions," says John Bassili, professor of psychology and dean's designate for the WebOption program. "In fact, by the middle of the course, two-thirds of the students were not coming to class."

WebOption course design

The University of Toronto at Scarborough currently offers 13 high-enrollment WebOption courses. All of them use lectures that are videotaped and made available online as streaming video within hours of the actual lectures. These videos are available for one week to all students enrolled in the course, regardless of section.

"The streaming video you get online is very much like what happens in a big lecture hall," Bassili says.

Student assistants videotape the face-to-face lectures. Other than ensuring that the microphones in the classroom pick up any interaction between the instructor and the students, teaching a WebOption course is no different than teaching a typical course in a large lecture hall. Bassili asks that students look into the camera and introduce themselves. "I see that as a way of symbolically having the [face-to-face] students stand in for the other students. They say things. They have personalities. And the class appreciates it. That's the kind of interactivity I encourage because it works online as well as in a 500-person theater," Bassili says.

Bassili uses PowerPoint and video clips in his face-to-face lectures. Students who view his lectures online get the same experience, but this requires some post production. Most of Bassili's lectures have two or three short video clips that he uploads to his PowerPoint presentation. To give the WebOption students the same experience as the live lecture, Bassili inserts these video clips in his online lectures. He incorporates compressed video into his PowerPoint presentations for the live lectures, but he inserts uncompressed video clips into his Web lectures so that the clips are not compressed twice (which would reduce the quality of the video).

Bassili's lectures are videotaped using mini DV videotapes that are uploaded into Adobe Premier for basic editing (to insert titles at the beginning and at the end, and to insert video clips from other sources).

Since students have the option of attending live lectures or viewing them online, the lines between the various sections are blurred. These are not distance students. They all come to on-campus office hours and take exams on campus. These courses also include an online forum with all sections, and unless a student mentions it, nobody knows whether he or she attends the live lectures or views them online.

Student opinions/outcomes

Bassili has conducted several studies on the WebOption program. The following are some of his findings:

- Of students, 80 percent are "extremely happy" to have the option of accessing the lectures online.
- Neuroticism—fear of missing something—is the main reason why students attend live lectures as opposed to viewing them online.
- Those who view the lectures online are more secure and don't mind learning independently.
- Students who view the lectures online tend to be more open to novelty.
- Students who like to use rehearsal as a learning strategy tend to prefer to view the lectures online, where they can pause, rewind, and watch the lecture multiple times.
- Harder courses are more popular online because of the advantage of being able to view the lectures multiple times.
- There is no significant difference in learning outcomes between the face-to-face and Web-based formats.

The WebOption approach is generally limited to multiple-section, high-demand, lecture-based courses. "Any time there are frustrated students who are unable to get the classes they want because they're full, in my opinion, there should be a WebOption to accommodate students," Bassili says.

For more information, visit www.utsc.utoronto.ca/ ~ joordens/

Seminar—A Good First Venture into the Online Classroom

By Rob Kelly

Like many instructors, Linda Romero, assistant professor of education at MassBay Community College, had some reservations about teaching online. Would her students be able to use the online learning tools? Would students become engaged in each other's progress? Would a lack of face-to-face interaction hinder learning?

Realizing the benefits that an online course offers students, particularly the ability to fit the course into their busy schedules, Romero decided to make the leap, but only with a course that offered some individual face-to-face contact with students—a practicum and seminar for early childhood education. In this course, students teach 12 hours per week and receive three supervisory visits during the semester.

In the face-to-face version of the seminar, students meet for a couple of hours each week for mini-lectures and discussions; Romero designed the online course to be conducted similarly. By the time they take the seminar, "students have taken most of their content courses already, so I don't have to provide a huge amount of content. It's just helping them bring it all together," Romero says.

Appearance

Romero was deliberate in making her online course "real" without being too complicated. She created a look to the course that matched the physical appearance of the education environments her students work in. The first thing they see when they enter the course site is a red schoolhouse with a flag waving and a bell ringing.

In addition to creating a familiar look, Romero designed her course so that each week's materials have a consistent font and color. "This provides a visual link that brings

things…together. It takes a little extra time, but students notice it and they [know] where they are when they're entering different parts of the course," Romero says.

Discussion

Contrary to the students' fears, they had more discussion in the online course than students in the face-to-face classroom did. Romero credits this largely to the introductions in the threaded discussion, which emphasize the students' common experiences.

In the threaded-discussion introductions, Romero asks students to talk about their teaching goals, their practicum classrooms, and personal information (if they are willing).

"I think having shared experiences is really the key to successful online teaching. Anything you do, any assignment that gets people out doing something…establishes that common connection," Romero says.

In her course, finding these common experiences is easy. Doing it in other types of courses is possible with a little creativity. For example, a colleague of Romero's was teaching a course to a group of diverse, geographically dispersed students. Romero suggested having them each take a field trip to a similar place—in this case a library. Each would go to a different library but all would be able to bring that similar experience back to the class and discuss the differences and commonalities.

"I think you can create something artificial to achieve that common experience, even if it's not a common practicum experience," Romero says.

Tone

One of the limitations of interacting in threaded discussions is the potential of misinterpreting intentions. If you say something sarcastic in a face-to-face class, students will likely understand your intention.

Romero is careful to guard against posting things that might be misinterpreted. The downside to this is a lack of spontaneity. On the other hand, Romero finds that she is more disciplined and less inclined to go off on tangents when she is online than when in the face-to-face classroom.

In the excitement of that engagement in the classroom, you can get carried away. I'm more responsible about that when I'm online, Romero says.

Romero uses the design of the course to set the tone as well. For example, initially, students often get lost in the online space, and she tries to make sure that doesn't happen by leaving messages for them in the places they might look, reminding them where to go.

In some instances, Romero includes an animated cheerleader in the site to indicate that students have found what they were looking for. "You establish tone through those kinds of messages that are actually part of the design of the physical environment," Romero says. @

A Guide to Creating Modular Courses

By Rob Kelly

Andrea Henne, dean of online and distributed learning in the San Diego Community College District, recommends creating online courses composed of modules—discrete, self-contained learning experiences—and uses a course development method that specifies what to include in each module.

Creating online courses based on modules can benefit the instructor and students. Modular design offers the following benefits:

- **Expedited course creation—** Often, the task of creating an online course is daunting for the faculty member. Focusing on the components that go into a single module at a time simplifies the process, enabling instructors to more thoughtfully design each learning component. After an instructor has created that first module, he or she has established a framework for creating subsequent modules. "Once you're happy with the structure and you've decided how students are going to interact with the material and what they're going to turn in and how you're going to do pre-assessment and post-assessment, the course design process is well on its way. All you're doing now is the creative work of finding the resources, content, and activities that fit the learning objectives," Henne says. In addition, by working on one

module at a time, instructors can more easily see how each activity relates to the course syllabus and desired learning outcomes.

- **Simplified course updates—** Modular design enables instructors to target specific parts of the course for improvement without having to overhaul the entire course. Because each module is a standalone learning experience based on specific learning objectives, when a publisher updates or discontinues a textbook, it doesn't necessarily mean that the entire course needs to be changed. With a modular course, textbook changes might mean simply changing the page numbers of assigned readings or reordering the modules to match the new sequence of the textbook chapters. In addition, modules are portable. They can be easily removed for use in other courses or course management systems, Henne says.
- **Consistency for users—**By incorporating the same types of components in each course module, students quickly pick up on the course's rhythms and patterns and have a better idea of what to expect than if the course were designed using a varying structure. "Often online students get a little bit lost, and they don't understand what they're expected to do. But if the course follows a format that's recognizable and comfortable, then the second week and subsequent weeks are consistent," Henne says.

Henne uses a template or "modular matrix" that outlines the components for each learning module. The template is not a cookie-cutter approach to online course design but rather a set of recommendations that instructors might find useful. "You don't want to box people in to a one-size-fits-all formula because you want them to be creative and innovative," Henne says.

The following are the components Henne recommends for each module:

- **Pre-assessment:** Each module should include an activity that determines students' initial knowledge of a topic before taking part in the learning activities within the module. The results of this activity can be compared to assessment results at the end of the module to measure achievement of learning outcomes.
- **Learning objectives:** These are specific statements, including the actions, performance criteria, and conditions of what students will be able to do upon completing the module.
- **Assigned reading:** Specify chapters, pages, documents, slides, lecture notes and provide guided reading suggestions or points for students to look out for in the reading.
- **Assigned writing:** Writing assignments can range from posts to the discussion board to formal papers. Each assignment should have a clear explanation of expectations and evaluation criteria.
- **Exercises/activities:** Each module should have an interactive activity for the entire class or for groups, which encourages critical thinking and practical application of the material covered in the learning module.
- **For further study:** Take advantage of the rich resources on the Internet and provided by publisher websites to enhance learning and stimulate students' curiosity to dig deeper into the subject matter.
- **Post-assessment:** The end-of-module assessment should be in the same format (e.g., essay or quiz questions) as the pre-assessment to measure student progress.

Henne encourages instructors to include assessments in each module to be able to monitor student progress throughout the course and to provide students with regular feedback.

Many course management systems have a selective-release feature, which enables the instructor to control access to parts of a course until a student has reached a certain level of competency. Achievement on a module can be determined by comparing the pre- and post-assessments or by the students submitting a checklist of tasks completed.

After years of teaching face to face, many instructors are able to begin teaching an on ground course without having the entire course laid out ahead of time. This approach doesn't work well in the online classroom. Henne recommends that instructors have their online courses completely created several months before students enroll in them, and the template she recommends can help them meet that target, allowing them the time to focus on other aspects of facilitating online classes.

"Faculty have been really grateful to see an overview of how to start, how they're going to proceed, and how they're going to end the course. Although the template is not designed as a lock-step process, it does provide a framework that supports the faculty member during online course design and development. All this goes hand in hand with faculty training on strategies for teaching online. This template is the foundation for effective online learning by guiding how you're going to present your materials and how students are going to interact and achieve the desired learning outcomes," Henne says. @

How to Eliminate Sources of Frustration for the Online Learner

By Patti Shank, PhD, CPT

Learning online can be frustrating. Online tools and technologies have a learning curve. It's easy to feel lost and disconnected. Answers to questions are typically delayed. Because the online learning experience is, by its nature, somewhat frustrating, we need to take as much *unnecessary frustration* out of the experience as we can. Why? Because this kind of frustration often leads to reduced satisfaction and learning, and increased attrition. These less-than-optimal outcomes aren't in anyone's best interest.

In this article, I will discuss common but unnecessary frustrations for online learners—and how they can be reduced or eliminated.

Typical sources of unnecessary frustration

Steve Krug, in his excellent Web usability primer, *Don't Make Me Think*, describes typical website frustrations and explains that it's not "rocket surgery" to make them less frustrating. Folks who sell online (such as Amazon.com and SmartBargains.com, my two favorite online shopping sites) clearly recognize the importance of usability because usability directly impacts sales. Frustrated folks simply don't stick around long enough to buy. Too hard to use? One or two clicks and they can land on another site that is easier to use.

But what about online learners?

They typically don't have the luxury of immediately going elsewhere, and unnecessary frustration is very hard to deal with while also trying to learn and fulfill course requirements.

Along with usability problems, extraneous cognitive load and unnecessary mental effort needed to deal with the learning environment can cause unnecessary frustrations for online learners. When the mental effort needed for dealing with unnecessary frustration rises, the amount left for learning tasks is reduced.

For example, imagine reading online course content about stratified random sampling (a statistical sampling method). The content contains links to other pages with graphical representations of the topics being covered. Needing to flip back and forth between graphic and text explanations requires much more mental effort than if the graphics and corresponding explanation are placed together.

Here's the bottom line: If learners can't easily find what they need, what they need isn't available (even though you know where it is). If learners are frustrated and cannot easily use and learn from the course materials, the materials are ineffective or worse.

Follow the clues

How do we know if learners are unnecessarily frustrated? There are two typical clues: Complaints about

difficulty accessing or using the course materials and lack of engagement or effort (for example, limited log-ins, few discussion postings, late or inadequately completed assignments). Complaints often help uncover unnecessary frustrations. Lack of engagement or effort can be caused by myriad 'outside' issues (such as family or work problems) but they can also indicate learners who have shut down from frustration.

The first semester I was an online instructor, one learner waited three weeks into the semester to ask me how to find the course discussions I kept referring to. Huh? I could have written this off as a bizarre occurrence but thankfully I didn't because I received a similar email the week before. With the learner on the phone, I followed what she was looking at and realized that the link to course discussions might not be obvious to new online learners because I referred to them as course discussions throughout the course content but the course management system referred to them as discussion forums. That was enough to trip up some new online learners. I changed the content so the term used was the same.

The first step to reducing unnecessary frustrations is to be open to the fact that they are likely to be there. The table below describes some general ways to address and prevent them.

Clue: Complaints about difficulty accessing or using the course materials

Things to do:
- Clearly explain how learners should get started and make this information easy to use (a checklist is good) and easily noticed.
- Make commonly used items (like

the syllabus and assignment directions and rubrics) very easy to locate.

- Obtain a student account to see what learners see (I always set one of these up for this purpose).
- Develop and use a consistent course structure so once learners learn how to use one online course, they know how to use others, even though the content may be different.
- If learners are reporting problems, ask them for specific details (so you can troubleshoot).
- Connect learners to campus technical support, as needed. (Following-up with the learner is a good idea.)
- Make changes to the materials to address common concerns and use announcements or broadcast emails to make learners aware of these changes.

- Keep an ongoing list of changes that need to be made in the future so these problems don't reoccur.

Clue: Lack of engagement or effort

Things to do:

- Design a low stress, fun initial activity to help learners learn the tools and feel connected. (I like course scavenger hunts for this purpose.)
- Quickly contact individual learners who don't appear to be engaged by phone (best) or email.
- Check in with individual learners periodically to solicit feedback about what is going well/less well and why. (Learners regularly tell me how valuable this is.)

Your turn

Find someone who hasn't seen your online course and ask them to do typical course tasks on your course website (for example, print the syllabus, determine what assignments are due in the first week, post a bio in the discussion forum) while you watch but without your help. Ask them to think out loud so you know what they are thinking and why they are doing what they are doing. See where they are confused and how many steps it takes to get it right. If you can keep yourself from helping them, you'll learn a lot about what may be unnecessarily frustrating.

When learners can't find what they need or are confused about where to go and what to do, we are inadvertently making it harder for them to learn. That's a situation that needs to be remedied if we want learners to be successful.

Resources

Krug, S. (2006). *Don't make me think: A common sense approach to web usability*, 2nd Edition. Berkeley, CA: New Riders Press @

Using Pre-admission Assessments to Help Online Students Succeed

By Patti Shank, PhD, CPT

Most things in life have built-in frustrations. For example, shopping at a grocery store during its busiest time and waiting in line to check out feels like a waste of time. Grocery stores have implemented self-service checkouts and special cashier-checkout lines for people with few items (who always seem to have far more than the allotted number of items) in order to reduce customer frustrations, but some frustrations can only be minimized, not eliminated.

There are common but inevitable frustrations for online learners. The tools have a learning curve, and updated versions and new tools require additional efforts. Waiting for communication (responses to a question, work from another learner on a collaborative project, feedback on an assignment, etc.) is often frustrating. Because the online learning experience is by its nature frustrating, we should try to take as much unnecessary frustration as possible out of the experience, because too much frustration leads to reduced satisfaction and learning; angry and frustrated learners; and attrition.

In this article, I'll discuss practices that help online learners, especially those who are new to online learning, to determine if they are good candidates for online courses in general and your online courses in particular.

Does the student have adequate computer and computer skills?

You've probably had learners in your online courses who have asked you basic computer questions like, "How do I open an attachment?" or complained that they couldn't access multimedia files. And if you're anything like me, you wondered why someone without an updated computer system and basic computer skills would attempt to take an online course.

Institutions that enroll new online learners who have outdated computers, dial-up Internet connections, and subpar computer and Internet skills should consider the consequences ahead of time or they will be dealing with the consequences, including frustrated and angry learners and greater-than-expected attrition, down the road.

Some institutions provide minimum computer hardware, software, and connection requirements as well as assessments to help prospective online learners measure the adequacy of their computer and Internet skills. For example, Pennsylvania College of Technology has a detailed listing of requisite computer and Internet skills (*http://penncollege.edu/advise/CSC110/csc/selfassessment.htm*). Some offer complex assessments to analyze whether prospective learners have adequate skills. For example, ETS offers an Information and Communication Technology Literacy test that uses realistic computer and Internet tasks to measure critical thinking and technical skills.

Is online learning a good fit?

We also need to help prospective online learners determine if online learning is a good fit for them so they can self-select into or out of an online course or program. Self-assessment tools such as The Illinois Online Network's Self-Evaluation for Prospective Online Students (www.ion.uillinois.edu/resources/tutorials/pedagogy/selfEval.asp) and Washington Community and Technical College's Is Online Learning for Me? quiz (*www.waol.org/getstarted/IsOnline4Me.asp*) can help prospective online learners consider whether they will be happy and successful online learners.

> When learners know in advance how the course works, they can make informed decisions about enrolling.

Some higher education institutions offer a "get me ready to be a successful online learner" course that is taken before other online courses (if needed…no need to frustrate those with adequate skills). This type of course typically has plenty of personal hand-holding and practice doing things that successful online learners need to be able to do, such as uploading and downloading files, using discussion forums, and evaluating the credibility of online resources.

Another option for helping new online learners is an online orientation. Regis University has a humorous and helpful online orientation, which is one of the best I've seen. It includes lessons that help new online learners discover how to get into their online courses; find and use the course syllabus and other course resources; use the course management system; complete and submit course assignments; and communicate with the instructor and other learners. My colleague Maureen Hencmann, an instructional designer with Regis, helped design this orien-tation, and it's a great example of creative design that serves an important need.

Clear expectations?

Online courses are just as different from each other as classroom-based courses, but some online learners make assumptions that can lead to unnecessary frustration. When learners know in advance how the course works, they can make informed decisions about enrolling. For example, one of my online courses involved numerous small de-liverables each week and lots of group work. It wasn't a good fit for learners who needed to travel for a living or be out of touch for a few weeks during the semester, because the course process was fairly inflexi-ble. Contrast that with another online course in the program that was flexible and primarily self-paced.

Some instructors don't provide adequate detail about course expecta-tions to prospective learners because they need a certain number of learners to enroll. This is a case of "pay me now or pay me later," because learners who aren't able to be successful quickly become problems (or worse). Consider adding a list of course realities and expectations to course descriptions so prospective learners can determine before enrolling if they are likely to be able to meet them.

Frustrations for learners commonly turn into frustrations for instructors and higher education institutions. Considering how to reduce unneces-sary frustrations and help new online learners succeed, therefore, makes both sense and cents. Consider how you, your department, and your insti-tution can use computer hardware, software, and access requirements; preadmission assessments; "how to be a successful online learner" lessons; and detailed course expecta-tions to help online learners succeed. @

Usability Issues That Impact Online Learning

By Patti Shank, PhD, CPT

Despite the benefits of online education, there are inevitable frustrations as well. The tools online learners need to use, such as discussion forums or integrated course management systems, have a learning curve. They don't always behave in intuitive ways. Waiting for communication (responses to a question, work from another learner on a collaborative project, feedback on an assignment, etc.) can be terribly frustrating.

This may seem counterintuitive, but some frustrations during learning are good. Learners are expected to struggle with new or difficult content. That struggle is part and parcel of the learning process. But there's a fine line between OK struggling and not-OK struggling. My son is a junior in college and struggles with some of the high-level math courses in his degree plan. You'd expect these courses to be hard and struggling with the content to be the norm. So when are learning frustrations harmful? When they negatively impact the ability to learn. One of my son's math professors sent broadcast emails to every student each week warning them that it would be hard to pass the course and that they should consider dropping out if they weren't up to the work. This turned into a self-fulfilling prophecy, and the anxiety made it impossible for most students to learn.

Because the online learning experience is, by its nature, frustrating, anyone who can take unnecessary frustration out should do so, because frustration leads to anxiety and frustration, reduced ability to learn, and attrition.

Usability

What I'm talking about is technical and learning usability, the ease (or lack of ease) with which learners interact with online instructional materials (pages, forms, media, etc.) and people (the instructor, peers, help sources). Good usability for online learning materials means the site, content, and media are easy to find, use, and navigate. And good usability for people means the interaction tools (such as email and discussion forums) are easy to use and facilitate getting input or help as needed.

Technical usability

Good technical usability involves minimizing system-related frustrations (for example, access, course systems, materials, and media) so learners can use them for their intended purpose without unnecessary hassles, delays, or extra steps. Here are some common recommendations for improving technical usability in online courses:

- Use a simple and consistent navigation scheme (for example, tabs labeled with the week number or topic containing all the materials for that week or topic).
- Optimize images and media for quicker downloading.
- Provide a list of required hardware, software, plug-ins, and bandwidth to prospective students so they know what's needed, technically, to succeed.
- Offer printable versions of pages that are likely to be printed, either by providing separate print versions or PDFs or by making sure that existing pages print well.
- Design online courses so they function similarly to each other. Once learners understand how to use one course, they will be able to use others more easily.
- Make materials or pages that are commonly used or referred to readily available without having to navigate through numerous menus and hyperlinks.

Learning usability

Learning usability is about minimizing unnecessary learning-related frustrations so learners can learn and deal with the frustrations that cannot be eliminated. Here are some common recommendations for improving learning usability in online courses:

- Manage expectations: Tell learners when to expect a reply to emails or questions so they aren't frustrated when you haven't answered in three minutes. (I encourage you to seem omnipresent in the beginning of courses with a large percentage of new online learners.)
- Make help available: Look at your course content and activities realistically. Any places where students are likely to get stuck? Provide extra help options at these times.
- Provide reality checks: Let prospective students know what to expect so they can determine if they have the access, motivation, and time for the coursework.

Whose job is this?

Maybe you're thinking this is too

much to worry about. It's hard enough designing content, activities, and assessments; facilitating course activities; answering questions; and grading papers and tests. But since the negative outcomes from poor usability end up in the instructors' and students' laps, it's our problem, whether we like it or not.

If you have access to instructional designers, they should be able to help you make your courses easier to use. If your institution has technical communications or human factors engineering degree programs, there's a good chance that faculty need projects for their students. Free help!

If learners can't easily find what they need and do what they want or need to do, what they need isn't available. If learners cannot easily use and learn from course materials, the instructor, and other students, they can't learn. So, no matter how good the content, activities, assessments, and people interactions are, if the learner can't easily find and use them, they might as well not be there.

Resources

Don't Make Me Think, 2nd Edition (New Riders Press, 2005)
Alertbox—*www.useit.com/alertbox*
Usability.gov—*www.usability.gov*
@

The Importance of Intuitive Navigation in Online Course Design

By Patti Shank, PhD, CPT

The first time I taught online, many moons ago, I ran into some snags. One learner emailed me three weeks into the semester, asking where the course discussion forum was. A week later, another learner asked where to find the syllabus. Weird? No—unfortunate, but not uncommon.

When learners can't find what they need or are confused about where to go and what to do, we are making it harder for them to learn. Being an online learner is hard enough without additional barriers. Plus, frustrated learners tend to either drop out or drive the instructor crazy. Bad idea.

In this article, I'll take a look at frustrations caused by two common and interrelated Web design problems: confusing course organization (how course elements are structured within the course) and unclear navigation (what links or buttons are used to access these elements).

Finding your way is NOT half the fun

A while back, I went into a Target store to buy an iron. I headed over to the small appliances section. I saw Crock-Pots, coffee makers, toasters, electric skillets…but no irons. I began walking around the store—past the shoes, car parts, bath rugs, doggie igloos—and I found irons near the plumbing supplies. The store provided clear "navigation" (overhead signs) but they weren't at all helpful because the store's organizational scheme (irons go with shower heads) didn't match mine (irons go with toasters and Crock-Pots).

Online content is often tricky to navigate as well. Effective navigation elements (such as links and buttons) should clearly tell the user several things:

- Where am I?
- Where are the things I'm trying to find?
- How do I get there?

Organizational schemes

The best way to help users find what they need online is by doing a good job of organizing the content into logical categories and using navigational elements to point users in the right direction.

Let's say you're browsing your institution's human resources site to find a family leave form. Which button should you click on to find this form? Benefits? Policies and Procedures? Family Support? The essential organizational dilemma for all online content is how to organize and label it so users can easily find what they need.

Exact organizational schemes are the easiest to navigate because the information is divided into clearly delineated categories. Some examples of online content that uses an exact organizational scheme include telephone numbers for everyone in a department (organized alphabeti-

cally), past orders (organized chrono-logically), and local distributors (organized geographically).

Most instructional content, however, is not organized as exactly because all the content doesn't neatly fall into precise alphabetical, chronological, or geographical delineations. And this is where the going gets frustrating for learners trying to find what they need.

There are numerous ways to organize an online course. Because most courses tend to progress in a chronological fashion, organizing them this way makes sense to learners. Below is an example of how an online instructor might organize a course chronologically, with elements that are accessed frequently through-out the course (Syllabus, Calendar) at the top level so they are easy to locate. (You might have guessed that my first online course was not organized this way….)

    Home
    Syllabus
    Calendar
    Course Content
    Week 1
        Reading
        Media
        Activities
        Resources
        Assessments
    Week 2
        Reading
        Media
        Activities
        Resources
        Assessments
    Discussion Forums
    Course cafe
    Course questions
    Week 1 discussion questions
    Week 2 discussion questions

Navigational elements

The purpose of website navigation is to help users understand how the site is organized, so they can click on the right link or button to find what they are looking for.

Here are some of the navigational elements most commonly used on Web pages.

There are pluses and minuses to all navigational elements. For instance, buttons are clearly meant to be clicked on in order to go somewhere, but button titles need to be both short (to fit on the button) and clear enough to tell the user where they are going.

Pull-down and pop-up menus take up less space than some other types of navigation but are harder to use, especially for folks with some disabilities; plus, they don't show the range of options until they are clicked on.

Text links are clear but they can be overused, especially when users think they are expected to follow each one. are clear and concise but overused in online in-structional content. They indicate content to be viewed in a lockstep fashion.

Doing a good job of organizing the materials in each course and providing navigational elements so learners can get to those materials easily is part science, part art, and part common sense. How can you tell if your site is well organized, with clear navigational elements? Grab a few people who don't know how your course works and ask them to find the syllabus, the slides for Week 5, the date for the midterm test, or other elements of your course as you watch silently, providing no help. Too many clicks or too much backtracking? That indicates a need for reorganizing or making navigation clearer.

On a final note, consider organizing all your online courses similarly, so learners who have taken one of your courses will instantly know how to navigate others, with little additional frustration.

Resources

Usability—the Basics—*http://wdvl.internet.com/Authoring/Design/Basics/*
Why people can't use eLearning
www.infocentre.frontend.com/uploaded_files/eLearning_white_paper.pdf @