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Systematic Approach to Online Instruction Saves Time for Instructor and Students

Time management is an essential set of skills for any online instructor. A deliberate, systematic approach to managing an online course can mean the difference between effectively guiding learning and wasting both your time and the students'.

The time it takes to teach an online course depends on a variety of factors, including the number of students, types and amount of interaction, student demographics, teaching style, and the technology used, among others.

While each course is different, with different learning objectives and methods, there are some principles that can be applied to most online courses. The keys to time management are

- designing a course that is logically organized, easy to navigate, internally consistent, and, if it is part of a program, consistent with other courses within that program
- establishing a set of processes that minimizes the amount of time spent on logistical issues and maximizes the efficiency of time spent interacting with students.

Belinda Davis Lazarus, associate professor of special education at the University of Michigan-Dearborn, has used these basic principles to create and teach online courses for

UMD's online masters of special education program.

The Template

Rather than relying on a commercial course platform, each of the 10 courses in the program uses a course template that Lazarus developed.

A key feature of the template is a navigation bar on each web page within each course, enabling students to link to any part of the course with a single mouse click.

Using this template, each course has seven pages: syllabus, professor's home page, assignments page, gradebook, prerequisites page, frequently asked questions page, and threaded discussions.

"If I was going to develop a course, whether I was going to put it in WebCT, ERes, or Blackboard, I would make sure that I had a link on every single one of my pages that enable students to very easily get back and forth between the syllabus, assignments, and the online discussion page, etc. It just reduces the amount of time spent responding to student questions," Lazarus says.

Streamlining E-mail

Providing timely feedback to students on assignments can be a

TIPS FROM THE PROS

Suggestions for Managing an Online Course

When designing and implementing a course, it is easy to overlook details that can make a difference to students. The following online course management guidelines from the University of Denver's University College serves as a reminder of techniques that can improve the learning experience:

- Schedule an optional face-to-face meeting. Students often take online courses due to time constraints, not necessarily distance.
- Provide a detailed syllabus for your class and begin with a personal welcome.
- Have your students introduce themselves either through the student web pages or by answering a thoughtful question in the discussion board.
- Establish participation guidelines for the class that provide structure while allowing for flexibility and negotiation.
- Make participation mandatory and include it in student evaluation. University College recommends mandating at least two posts per week or requiring one post per week for each of credit hour. (A standard

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TIME MANAGEMENT

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time-consuming activity. Lazarus believes that some of that feedback can be automated by providing students with correct answers as soon as they submit their assignments.

To streamline this task, Lazarus modified the submissible forms in FrontPage to provide students with this automatic feedback on their assignments.

In FrontPage, forms are a set of web pages that function together: a page that contains the textboxes, a results page that receives the contents of the textbox, and a confirmation page that appears as soon as a student clicks the submit button.

The typical response to students from a FrontPage form is simply a confirmation that the assignment was received. Lazarus figured that since students would be receiving the confirmation page anyway, it would be helpful to include the answers to the assignment to allow student to check their work without having to occupy the instructor's time.

To add answers to the confirmation page, Lazarus simply copies and pastes the answers from a Word file or types them directly on the confirmation page.

This process saves time of having to grade and provide feedback on a daily basis and it does not hinder students' progress. "Students appreciate getting the answers back right away because that tells them where they went wrong, and they feel that they can then proceed to the next assignment without having to wait until their grades are posted or without having to e-mail us," Lazarus says.

The automated feedback is not the only feedback students receive. In a typical week, Lazarus will e-mail 10 to 12 of a course's 25 or 30

students. Of those, six or seven will receive individual feedback on what they did wrong on an assignment, and those who did well receive positive feedback to encourage them to continue with their progress.

Managing Online Discussions

Perhaps one of the best indicators of the quality of an online course is the depth of the online discussions. Instructors often have to resort to stringent grading policies to encourage student participation. However, without clear guidelines, attaching a grade to the amount of participation will only result in a high volume of posts of varying quality, which can be a real time waster for the students and the instructor.

To solve this dilemma, Lazarus limits the number of messages that each student can post in each threaded discussion and clearly explains what kind of messages are acceptable.

While limiting the number of messages a student may post might seem counterintuitive to instructors who struggle to elicit even minimal student feedback, Lazarus says that students appreciate and it keeps the discussions focused.

When Lazarus first started teaching online she did not have any limits on the number of messages students could post. Since participation in the online discussion was worth one-third of the grade, some students posted as many as 15 to 25 messages per week, hoping that more messages would get them more points. "But the messages weren't of any substance, and students complained about these students on the course evaluations," Lazarus says.

To put the limit in perspective when other online instructors ask her about limiting the number of

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messages, Lazarus answers with this question: "If this was a live class, how much time would you have for a student who raises his or her hand 30 times per session?"

Each week students have reading assignments, websites to visit, and text-based online lectures. Each student is required to initiate a thread for each unit in which they talk about, describe, expand on, and analyze one concept from the unit. Each student also has to respond to a classmate's message in a way that extends and adds to what that person said using research, opinions, or personal experiences.

"I tell them, 'You've got to add something new to the discussion and demonstrate that you've read and understood the assignment.' If they're having problems at the beginning, I tell them, 'Type out your message and read it. If you could have written it without reading the assignment then you're probably not going to get any points for it,'" Lazarus says.

Grading Online Discussions

Reading, participating in, and grading the online discussions is the most time consuming aspect of teaching online for Lazarus, even though students will on average contribute 100 to 125 messages in a discussion to Lazarus' 27.

Lazarus participates in the threaded discussions by asking questions, contributing to interesting threads, and providing current information, when necessary. "I try to model the kind of participation in the discussion that I want the students to engage in," Lazarus says.

As the discussion is taking place, partly as a timesaving device and partly as a way to keep students on track, she grades the threaded discussions as they occur rather than

waiting until the end.

She tracks online discussion grades in a paper gradebook. "If I see that someone is going radically awry and heading for zero points in a discussion, I will cut and paste his or her message in an e-mail message and make comments in blue, which gives them a chance to get back into the discussion," Lazarus says.

Personal Management

When teaching an asynchronous online course, managing one's time becomes critical because it's far too easy to develop time-wasting habits, e.g., interrupting your usual work to answer student e-mails as you receive them rather than taking a systematic approach.

To limit the number of e-mail messages she gets from students, Lazarus requires that they first post their questions in the threaded discussions before resorting to e-mail because other students often have the same questions, and answering a question once in public is far more efficient than answering it multiple times individually.

Lazarus filters all her incoming e-mail messages into a folder that is not her in-box and maintains strict advising hours so students know not to expect an immediate response to e-mail inquiries.

Rather than working on the course in her spare time, she devotes the same two hours each day to the online course. In those two hours, she finishes work on one piece of the course before moving on to another. She starts with e-mail because that is where students go if they have major problems, followed by participating in and grading online discussions, and grading assignments.

She keeps a faculty results page that contains all the frequently visited links that she needs to visit to conduct the course, including links

to individual student competencies, a grade book link, answer keys, and links to each discussion. "Having all of that in one place is a real time-saving device for me because I don't have to keep flipping back and forth through assignment pages and 10 or 12 separate results pages," Lazarus says. @

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three-credit course would require three posts per week.)

- Promote collaborative learning through small-group assignments, case studies, simulations, and group discussions.
- Encourage students to post their work and to provide feedback for each other.
- Develop a well-organized website that includes a place for students to socialize.
- Include an area for students to comment on the online learning experience.
- Encourage students to use real-life examples in the course.
- Avoid lectures. Try to make your online course as interactive as possible.
- Maintain a presence in the course. Let your students know you are there by commenting on what they say in the online discussions and asking additional questions. But do not dominate the discussion.
- Know the technology. You should be comfortable with the course management system and any supplementary technology to be able to help students use it.

Reference

Accessed on 12/2/02 at www.universitycollege.du.edu/resources/faculty/tipsandtechnique/ucolguidelines.asp. @

STUDENT SUPPORT

Online Algebra Course Uses Bulletin Boards to Help Students Deal with Math Anxiety

Recognizing an unmet need, Christa Emig, interim director of instructional technology, and Don Lucas, psychology professor at Northwest Vista College in Texas, developed an online college algebra course that addresses math anxiety.

Emig's course, a fully online algebra course that uses WebCT and software from Academic Systems, requires more self-discipline and work from students most face-to-face courses, she says. "And I'm up front with them: 'If you think this is going to be less work, then you need to get out of this class.'"

Recognizing the amount of effort required for the course, Emig and Lucas did not want to add a huge burden but felt that discussing math anxiety would help some of the students, particularly those taking the course as part of a graduation requirement who are unsure of their math abilities.

"We came up with bulletin board topics that talk about how their perceptions about math, family experience, and good or bad teachers can affect their learning. We are basically trying to take them through some desensitization to math anxiety by structuring the bulletin boards — asking open-ended questions and giving them specific topics to talk about," Emig says.

Emig requires all of her students to participate in the weekly asynchronous discussions, which are intended to take 15 to 20 minutes.

As Emig puts it, teaching online often feels like she has 20 classes of one student rather than one class of 20. "It's so easy for each student to feel that he or she is the only one doing math. They forget that there are other students in the class. By having

these bulletin board discussions they can talk to the other students."

A key component of building this community is requiring students to directly address each other in the relative anonymity of the online bulletin board.

She starts the discussion about

"It's so easy for each student to feel that he or she is the only one doing math. They forget that there are other students in the class. By having these bulletin board discussions they can talk to the other students."

math anxiety by posing a question such as "What did you want to know about math but were afraid to ask?" She then follows up that question to get additional feedback, and asked students to address another student's comment or question.

Other prompts include:

- List five positive and five negative things about math.
- Write about a math topic that you cannot find any meaning in, such as imaginary numbers.
- Do you think your family has had an influence on your current attitude toward math?

"We're not trying to burden them but just sort of carry on a conversation and open their eyes," Emig says.

Requiring all students to participate in the discussions, regardless of their math anxiety levels, gives those with math anxiety the perspectives of those who do not have math anxiety. The students with

math anxiety soon realize that everybody in the class has to work hard to do well in the course, and getting that perspective helps.

As for Emig's role in the course, she sees herself mainly as a taskmaster, helping to make sure the students keep up with the work and helping them with technical problems.

The course begins with a face-to-face orientation in which the students learn how to use WebCT and meet each other. Emig calls each student every Sunday for the first three weeks of the course to ensure that they get off to a good start.

When students come to her with problems, she works with them individually via e-mail, telephone, or in person.

Emig's interaction with her students and the online discussions are techniques she has developed to humanize the course. Although the effects of these efforts may be hard to measure, Emig believes they will help some students. "Don and I argue that what we're doing has a long term effect. Is it going to affect their grade in math this semester? Maybe not. But is it going to help their self-esteem? We hope so." @

Share Your Ideas

If you have developed an innovative online course or have some online teaching tips you would like to share with the readers of *Online Classroom*, contact Rob Kelly at <robkelly@magnapubs.com>.

Digitizing Lectures for Web/CD-ROM Delivery

When Eric Simon was an assistant biology professor at Fordham College at Lincoln Center, a student with a recognized learning disability requested audio recordings of his lectures. So he started wearing a wireless microphone and bringing a laptop computer to class to make MP3 recordings. “Then it occurred to me that I had these audio files, and I had the PowerPoint files that I was talking about. Why not sort of hook the two of them together and make them available for my distance learning students?” Simon says.

Prior to digitizing his lectures, his courses consisted primarily of html versions of his lecture notes. The revised online courses came closer to conveying all the benefits of the face-to-face lectures.

Recording and producing these digital lectures was fairly straightforward. Since he also taught the courses — non-major introductory biology and chemistry — on campus, he simply recorded his actual lectures, which saved the extra step of having to recreate them in a studio. It also enabled him to include students’ questions.

Recording the lectures was relatively unobtrusive. Although he reminded the students that the lectures would also be used in his distance learning courses, he says their behavior was no different from students in a typical face-to-face course.

To make post-production easier and to ensure that his distance learners understood everything that happened in the classroom, Simon did the following:

- He made a tapping sound on the recording to indicate when to advance to the next slide.
- When a student asked a question, he walked up to the student to make sure the question was recorded. (He had the only micro-

phone in the room.)

- He explained things that were occurring in the class if the audio itself was not enough to convey the information.

Each PowerPoint slide corresponded to a specific part of the audio recording; in some cases, a slide would correspond to 10 seconds of audio, and in some cases a slide would correspond to 10 minutes. After the lectures were recorded, Simon used MacroMedia Director to link the audio with the PowerPoint slides.

He could have simply posted the audio and PowerPoint presentation separately and had students advance the slides at the appropriate time, but Simon decided to turn the lectures into self-executing files. Linking the MP3 recordings with the PowerPoint presentations took approximately 90 minutes for each 90-minute lecture.

Simon found that due to advances in the disciplines, particularly biology, the shelf life of these audio lectures was approximately two semesters. “I was lucky to be teaching the same courses both online and in person. Therefore, it was not a big problem for me to update my audio frequently. I could take the most recent version of what I had done,” Simon says.

Simon used Blackboard to deliver his courses. He used Blackboard’s folder feature to create an easily accessible packet of materials for each week, which included discussion boards, ungraded online quizzes, lecture notes, lecture summaries, external links, an online glossary, and the digitized lectures.

Outcomes

Although he did not conduct a formal study of the effects of the audio on learning outcomes, Simon

says it seemed to stimulate more discussion. He estimates that there was a 25 percent increase in the number and length of posts to the class bulletin board. Simon’s stories and asides and questions the on-campus students asked often stimulated debates in the online course.

Simon, who usually gets high teaching evaluation scores from his on-campus students, says that the online learners gave similar feedback.

Simon asked students for feedback in the online courses four times during the semester, much more than in his face-to-face courses. “I couldn’t read their body language and wasn’t able to see the discomfort on their faces. So I tried to substitute for that by having more frequent feedback opportunities.”

Based on the feedback, Simon decided to offer the lectures on CD-ROM and online. Four CD-ROMs were enough to contain a whole semester’s lectures.

Future Improvements

Simon was pleased with the quality of his online courses. However, if he had more resources he would

- improve the audio mix to be able to hear students’ questions better
- use DVD-ROMs instead of CD-ROMs to be able to have larger files on one disk, enabling a higher sampling rate to improve sound quality
- include video for demonstrations.

“I would like to include a video component. However, even if I had the bandwidth, I would not want to have a video stream of me lecturing. It just doesn’t add anything to the course to see me walking around,” Simon says.

Instead, Simon would use three-to five-minute video clips of visual demonstrations that would involve

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Managing an Open-Entry Online Course

Open-entry online courses are about as flexible a learning situation as students can get: They can enroll whenever they want to and proceed at their own pace. For instructors, it's an administratively challenging endeavor, particularly when dealing with large numbers of students who are at various points in the course at any given time.

Brian Earle, professor of natural and applied science at Cedar Valley College in Texas, teaches an open-entry, two-semester, freshman-level inquiry-based biology course for non-biology majors.

The course is what Earle calls "worldwide ready," meaning it can be taken anywhere in the world without having to come to campus for any reason. The course, which uses Blackboard, features physical labs that students can perform on their own at home as well as several lab simulations.

Students can start the course at the beginning of any month and generally have 16 weeks to complete a semester's worth of work. The course can also be accelerated to meet the needs of individual students.

With the support of a full-time instructional associate, a part-time secretary, and technical support from Dallas TeleCollege (Dallas County Community College District's online college), Earle handles up to 425 students who can be at any point in the course.

Teaching this course constitutes Earle's entire workload. He is responsible for course content and tracking students. The instructional associate's primary responsibility is helping students with lab investigations and grading them. The secretary handles registration, enrollment, grades, passwords, and IDs.

"Having all these students at different places and having come from

a traditional classroom background was pretty unnerving for a while," Earle says.

To help track all these students, he uses a Microsoft Access database. "If I was in a regular classroom, everybody would pretty much be at the same place. I would know exactly who took test 1 or test 2 because I would administer those

"Having all these students at different places and having come from a traditional classroom background was pretty unnerving for a while."

tests. Since we have folks at all different points, there's no way to really know that or see that, particularly if you have hundreds of students," Earle says.

The database enables Earle to run various reports, including assignment inquiries that tell assignment due dates for individual students, which assignments a student has submitted, and whether he or she is more than one week behind on an assignment.

Not all of the data entry for the database is automated; some must be entered manually. When a student takes a quiz within Blackboard, the results automatically populate the Blackboard's grade book, which is then downloaded into Excel (Blackboard cannot be downloaded directly into Access, and Access has features that Excel does not, so creating and updating the database is a two-step process.) For lab investigations, students mail in handwritten reports that are graded and entered into the grade book manually, and once a week the grade book is downloaded

into Excel.

Although the course has a bulletin board, Earle has not found an effective way to facilitate discussion among students working on different parts of the course. Instead, most of the communication in the course is between Earle and individual students via e-mail.

"Unless I get an e-mail from a student where he or she needs a specific question answered, these are usually group e-mails, usually reminders to submit assignments, etc.," Earle says.

Earle has been teaching the course for several years and has had few opportunities to make changes. Next summer he will shut down the course to upgrade to the current version of Blackboard. He is also considering offering students a choice of labs for each topic. "A student might find one more interesting than another, and that interest might pay off in terms of doing better on that activity," Earle says.

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props. "Adding the video component could have had a sound pedagogical basis because we do know that there are students who learn better that way," Simon says.

For others considering incorporating multimedia lectures into online courses, Simon advises: "Think about what makes your lectures unique, interesting, and worthwhile, and then ask, 'How can I adapt that to the particular medium I'm using to deliver my course?'"

Eric Simon is currently an assistant professor of biology at New England College in Henniker, N.H. He can be reached at esimon@nec.edu. @

Technical Writing Course Focuses on Collaboration

Working collaboratively in an electronic environment is one of the main goals of Business and Technical Communications for Telecommunications, a course that is part of a two-year degree through a partnership between Pace University and the National Coalition for Telecommunications Education and Learning.

Although similar to face-to-face collaboration, online collaboration requires a more deliberate method, which Pace University co-instructors Susan Feather, professor of technology systems, Kitty Daniels, assistant professor of technology systems, try to bring to the course.

One of the concessions to the online environment is allowing more time to collaborate. According to Feather, collaborative online assignments can take twice as much time as comparable assignments in on-campus courses because much of the online collaboration happens asynchronously.

And instead of the traditional groups of four or five, online collaboration works best in groups of three, Feather says.

The course's major collaborative project calls for each team to produce a technical manual. Although most of the collaboration for this project occurs asynchronously, Feather and Daniels try to make synchronous communication as easy as possible by forming teams according to time zones in case team members need to speak to each other.

Feather and Daniels allow each team to use the methods that work best for them, which can include threaded discussions, chat rooms, telephone calls, and face-to-face meetings. They choose teams early in the semester to allow team members to get accustomed to working

with each other before taking on the main project.

A Lesson in Collaboration

Before the main project, Feather and Daniels introduce students to collaboration theory, the techniques for collaborative writing groups and the roles of the individuals in collaborative work, based on Hedley Dimock's research on group theory.

They discuss the roles that individuals take on as a group develops and how the roles center on the tasks at hand, such as group-building and maintenance roles. "In order for a group to be a really productive team, it needs to have a good balance among supporting, encouraging, mediating, harmonizing, and leading roles, and it doesn't always happen that they become a maturely functioning team," Feather says.

Feather and Daniels provide the students with explanations of the stages of group development. "We point out the advantages and disadvantages of collaboration, many of which they've already discovered because they've worked in teams for a few weeks already," Feather says.

The lesson begins with an overview of collaboration and then goes into the more specific problem of writing collaboratively and reaching consensus. "We also warn them that if they merely delegate the different parts of the technical manual without working collaboratively to revise it, they run the risk of it appearing disjointed because it will be obvious that different people wrote different sections," Feather says.

During this lesson, each group composes a memo relating group theory to their actual experiences working collaboratively online. They discuss the pitfalls of online com-

munication and how best to convey clear messages via e-mail and online discussions.

The lesson serves two purposes: to prepare students to work within the course and to help them develop the collaboration skills that have become a necessary part of the telecommunications industry.

Student Uses of Collaborative Technology

The students tend to use all the tools available through Blackboard, the course's delivery platform. They send files back and forth using the file transfer feature, or they attach files in the discussion board.

"Most of the time, they'll send the files to one another to read individually and then come back and discuss them either in the chat room or on the discussion board. They'll talk about revisions, either synchronously or asynchronously, and then come back together and send files back and forth as revisions are made," Daniels says.

Student surveys show that they mostly use e-mail to send files back and forth and the asynchronous discussion boards to discuss revisions, but there has been an increase in the use of chat rooms, Daniels says.

"I think when they come together to do the editing, especially the final editing, they prefer to meet synchronously," Daniels says.

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Structure Encourages Student Participation in Online Discussions

Bulletin board discussions, a key component of many online courses, often suffer from a lack of quality student participation. You can require participation, but without the proper discussion prompts and guidelines, students may not take the conversation beyond the rudimentary level.

While attaching a grade value to the number of messages students post will get most of them to participate, thoughtful participation that expands the conversation is far from guaranteed.

To improve the conversation in his bulletin board-based introduction to psychology and online survey courses, Don Lucas, psychology professor at Northwest Vista College in Texas, uses a set of discussion techniques to increase their intrinsic motivation, which has improved online discussions and student success.

Questions, Answers, and Interest Items

Online discussions comprise 50 percent of each student's grade in Lucas' courses. Each week Lucas begins a new discussion topic based on the material students are currently reading for the courses.

He initiates the conversation with four or five posts — questions, answers, and interest items — at the beginning of the week. He encourages students to initiate topics as well.

Each time a student posts a message he or she must pose a question, answer a question posed by someone else, or give an item of interest — information about something related to the topic.

Each discussion is worth 15 points. Lucas awards points based on how well students incorporate

the following three perspectives into their messages: their opinions, answers, questions, or interest items; an expert's perspective on the question; and their classmates' perspectives.

"I tell my students right from the beginning, We're going to define what truth is. And truth is not what you know; it's not what some experts know; it's not what your friends say, but it's probably some combination of those three items," Lucas says.

"I tell my students right from the beginning, We're going to define what truth is. And truth is not what you know; it's not what some experts know; it's not what your friends say, but it's probably some combination of those three items."

Instructor as Student

When discussions are going well, Lucas places himself in the conversation and participates much like the students do.

"Most of the time, I'm just another student. I'm posing a bunch of questions, and my students are coming back with the answers. What's powerful about it is it's not just students quoting from the book, giving opinions, or saying 'great idea. I agree.' They're integrating all three of these perspectives, and it makes for an extremely illuminating conversation," Lucas says.

When students draw inaccurate conclusions, Lucas takes on the

role of facilitator, asking where they base their conclusions on. "When I do have to facilitate it makes for a nice learning experience because we get to address a concern, issue, or stereotype. And that's how stereotypes are actually overcome. That's how prejudices are overcome, not by denying them but by asking, Where did it come from?"

Intrinsic Motivation

In a typical course of 20 students there will be 100 to 200 bulletin board messages per week. Even after students have earned all the points possible for a discussion, they continue to post messages. Lucas credits the structure of the bulletin boards for this continuing conversation.

Students are not permitted to skip ahead to future bulletin board topics. "If I gave students all 15 or 16 topics to discuss, we would lose the idea of a group conversing on a particular topic," Lucas says.

While students cannot skip ahead to future bulletin board topics, they can go back and continue previous conversations. And they do. "They're continuing to have a conversation. That's one of my pieces of evidence that the intrinsic rewards are working. I post their grades every week, and even though they have their 15 points they're still conversing," Lucas says. @

E-Jargon

Storyboard: Screen-by-Screen outline of a multimedia project used for planning purposes. @