

Considerations for Converting a Course for Distance Education Delivery

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With the advent of correspondence courses in the late 1800's, faculty confronted the issue of course design for distance delivery. As the decades passed, technological developments made it possible to expand the types of distance education available, for example, audio-based ETNs became popular and today various forms of compressed and full motion synchronous delivery are in high demand in PK-12 school districts, higher education institutions, and businesses. The complexity of course design for multiple site learning environments has increased proportionally to the delivery modes.

When an educator agrees to offer a "traditional" course to remote sites using distance education technologies, the instructor/trainer will want to use the electronic media provided in the distance learning environment to strengthen pedagogy and add variety and collaboration to the teaching/learning experience. To do that, changes must be made to that "contained classroom" course. But, does the instructor/trainer need to design a whole "new" course for distance delivery? How much of the existing course content can be covered and what is the best way to deliver it? What course materials can be used? Do they need redesign for distance delivery? What classroom activities will work via a distance? What is the best way to handle student assessment and course administration and communication?

This paper contains hints, tips, and strategies for redesigning a course for synchronous, distance education delivery. It steps through a course conversion process and suggests alternative communication methods and varied classroom activities. It recommends options for establishing a "community of learners" that spans the distance. Last, it details successful collaborative learning methodologies.

Teaching a Distance Learning Class: What's Different?

As an instructor transitions from the traditional classroom to a distance learning environment, the classroom differences affect the way the class is taught as well as the materials and technology used to teach the course. The most noticeable difference between a traditional classroom and a distance education classroom is the technology. Beyond the technology needed for course delivery, such as the cameras, monitors, and microphones, distance learning rooms are well equipped with instructional technology including a computer, a VCR, a document presenter, and the capability to switch easily between the media and the teacher and student cameras. Some rooms are also equipped with a white board. The environment, therefore, lends itself to media-rich presentations that incorporate graphics, sound, and animation. To take advantage of the

distance learning technologies and to avoid the “talking head” syndrome and the passive nature of long, lecture-based course sessions, instructors need to rethink their course.

The second major difference between the traditionally structured class and a distance learning class, student proximity, presents challenges not only for the course methodologies but also for the course administration and management. How will office hours be held? Who will monitor exams at the remote sites? Will the students “gel” as a learning community despite the distance? How will the logistics work for transferring handouts and homework? Good course design and preparation will ease concerns in these areas. Technology can again play a key role in minimizing these concerns.

The Process of Converting a Course for Distance Learning

When moving a course to the DE mode, it is not necessary to begin over. However, moving a course to the distance learning environment affords the instructor the opportunity to reevaluate the goals, objectives, and outcomes for the course. It may provide the impetus needed to include or expand the use of instructional technology in the course as well as create or revise instructional materials. As I work with instructors who are converting their courses, I often witness a renewed spark for teaching. Having to rethink the course actually proves motivating and refreshing.

Re-evaluate the course’s goals, objectives, and outcomes.

Appendix A contains a form for guiding faculty through an instructional design process as they rethink their courses. The first step consists of reviewing the course’s goals, objectives, and outcomes. Do they continue to be relevant? Are they appropriate for the students who will be served via the distance education approach? In many cases, the goals, objectives, and outcomes are directly transferable to the distance education environment, or they need minor revising.

Examine the assessment instruments.

The next step consists of reviewing the traditional means used to evaluate whether or not the students have reached the desired outcomes. If quizzes and tests have been used, will there be someone available at the remote sites to administer the quizzes and tests, secure the results and assure their transfer to the instructor? If students need to complete a major paper or project, can the resources for them to do so successfully be made available equitably to all students? Are the remote sites properly equipped for students to give presentations? Therefore, during the course conversion process, the instructor must do some “homework” related to distant facilities and to the library and reference resources available. Authentic assessment techniques, including creating portfolios, keeping reflective journals, and completing a “real world” project, provide alternative ways for students to demonstrate content and skill mastery with less reliance on course facilitators and materials transportation.

Formative assessment, that collected periodically to help the instructor pace the course and adjust contents, if necessary, should be collected frequently in the distance learning classroom. Simple techniques such as having students write down a question a week or send an email responding to a particular question the instructor asks, can help the instructor gauge student understanding and progress. Dr. Douglas Eder from Southern Illinois University at Edwardsville provides some

good ideas for classroom assessment at this URL:
<http://www.siue.edu/~deder/assess/catmain.html>.

Summative assessment, that collected at the mid-point and end of the term, is used to make curriculum and environmental changes. Both kinds of assessment should be used and course adaptations made based on the feedback.

Examine the course module/unit content.

In the traditional classroom, instructors absorb a small amount of class time each day for administration activities: taking attendance, returning homework, collecting assignments, clarifying questions, etc. In the distance education classroom, instructors have this overhead plus the additional overhead of testing audio/video connections, displaying sites full screen for questions or presentations, etc. Distance education sessions may also be on a fixed schedule, that is, the network connection may automatically terminate at a certain time. Instructors may not have the luxury of detaining students just two more minutes to give the next assignment. Consequently, it is not possible to cover the amount of content in a distance education environment that can be covered in the traditional classroom. In addition the rule of thumb about varying your teaching strategies every fifteen minutes in the DE environment reinforces the use of mini-lectures rather than the fifty-minute lecture sessions common in the traditional classroom.

Therefore, the instructor must examine the course content. What information must the instructor present? What information can the students acquire in other ways such as handouts, reading assignments, self-assessments, pre-programmed quizzes, journal entries, student-to-student sharing, case studies, Web resources (simulations, videos, presentations, etc.)? At the University of Wisconsin-Madison, DoIT's Emerging Media Technology group (EMT) and the Department of Learning Technology & Distance Education (LTDE) maintain a Web site, <http://pocahontus.doit.wisc.edu/>, that illustrates the use of multimedia to deliver course content via audio lectures, audio demonstrations using a PowerPoint presentation with voice overs, tutorials, and demonstrations using streaming audio and video.

Deciding delivery modes for course content may be the most difficult of all tasks related to course conversion. It is also the most necessary. I have witnessed a great deal of frustration and added stress on the part of faculty members who attempt to cover the same amount of lecture material during their DE class that they cover in a traditional class.

Use of Technology

This may be a good spot to interject the section on technology. Using multiple forms of technology can facilitate the delivery of course content. Here are a few brief examples of how class administration can be managed and course content can be delivered *sans* class lecture.

- **Electronic mail**
Email can be used in a variety of ways for both course management and content delivery. For example, email the class syllabus, handouts, and class assignments, have students email homework, use email for on-line office hours, share student email addresses with

the whole class so students can communicate with each other, can prepare group projects or reports, and use each other as resources to clarify assignments, questions, etc.

Note of concern: An instructor cannot assume that all students will have email; however, an instructor can let it be known that email access will be a class requirement. Also, if the instructor anticipates using email attachments, attention must be given to the formatting of such attachments. In one distance education class, I discovered that the students were using not only different email applications but also six different word processors on both Macintosh and Windows operating systems. Amidst such diversity, the instructor may wish to allow or require assignments that can be transmitted in the “text only” format.

- **Discussion Lists:** Establishing a class listserv can help not only with class management but also with content delivery. Handouts can be made available on the listserv as can scanned documents. Students could be assigned articles to read and post summaries for the rest of the class. Peer editing, case scenarios, the “question of the week,” are among some of the ways students can interact with course content on-line.
- **Class Web Pages:** The class syllabus, assignments, relevant course links, handouts, self-assessments, PowerPoint or other presentation graphic files, can be made accessible via the Web. From an authenticated site, one where students log in, articles or book chapters utilized under the copyright fair use law can be made available.



Note of concern: An instructor cannot assume that all students will have Web access; however, an instructor can let it be known that Web access will be a class requirement. Also, if the instructor anticipates using the Web as the only access to some course materials or class assignments, attention must be given to student access. How are students connecting? Modem speeds can help an instructor decide whether or not to include audio and video links for the course. Do students know how to manipulate .pdf documents? Does the instructor have the means to create .pdf documents? Are the student browsers Java compatible? Frame compatible?

- **Groupware:** Web-accessed groupware products such as WebCT, Web Course in a Box, NiceNet, and Lotus Notes/Learning Space especially aid in the on-line delivery of course content, course resources and facilitate class discussions, group projects, and, in some cases, class assessment. They are worth the conversion effort. As with the Web, modem speeds and browser versions may hinder students.
- **Some Technology Tips for DE Instructors**
 - ✓ Increase your technology literacy with the computer applications you will be using. If you are displaying a spreadsheet, for example, know whether or not the application allows you to change the font size or enlarge an area that the remote students can see comfortably. Learn how to change the font size in your Web browser to make showing Web sites feasible in the DE classroom.
 - ✓ Learn how to use a presentation graphics application. Experiment with templates and font types, sizes, and colors to maximize readability.

- ✓ Review basic graphic design principles.
- ✓ Have a back-up plan.

Evaluate Course Delivery Materials

The common overhead transparency will not work in the distance learning environment; it is sized wrong and will glare under the lights. Most times instructors produce overhead transparencies and other classroom materials in the portrait style. For distance learning the 3” X 4” ratio applicable for video presentations means that materials should be produced in the landscape style for best viewing. Presentation graphic software, like PowerPoint or Astound, use templates already set in the landscape mode. Therefore, placing presentation materials in a presentation graphics application makes sense whether the instructor intends to use screen slides or hard copy printouts for the class.

Do not use portrait format  Landscape mode, 3x4, 6x8, works well 

A document presenter accepts 3-D objects as well as documents. The document camera’s capability to zoom in and out makes it easy to show these objects in the DE environment. It also makes it easy to display a chart or graphic that may be printed in a journal or newspaper. For complex charts or graphics, a handout can be distributed to the students so they can see the whole and focus on a particular area as the instructor enlarges that area using the document camera.

Whether the instructor is using an on-screen presentation or hard copy on the document presenter, the distance education environment lends itself well to the use of word pictures, graphic symbols of concepts, principles, relationships, and information. Tom Cyrs in his book, *Teaching at a Distance with the Merging Technologies* (1997), states,

“The use of word pictures is one technique that holds promise to help instructors to visualize their ideas, show specific and different relationships among them and involve students with their own learning.” (p. 228)

In all cases, the instructor needs to be comfortable with basic graphic design principles.

VCR and DVD use depends on the delivery mode for the class. Courses offered via compressed video may not have the capability to show motion videos well. Full motion, two-way video and audio transfer mode works well for showing video and DVD clips. As with extended lectures, it is not a good idea to show video for a whole class period. Rather, instructors should choose video clips carefully, have them queued for quick access, and introduce them so the students can pay particular attention to the video clip’s purpose. If a complete video is necessary, copies can be distributed to the remote sites for students to view outside of class time. Audio tape excerpts also work well in the distance education environment. Again, a good introduction helps as does showing a picture of the speaker or speakers while the tape is playing.

A white board, when installed in distance education facilities, adds teaching flexibility to content delivery. Where a white board is not available, the document presenter and light blue paper with

a medium-to-thick marker works well. Additional flexibility can be gained by combining hard copy from a presentation graphics program with the document presenter and markers.

Examine Student Activities

Often student activities, including large and small group discussion, role playing, brainstorming, and story telling, work as well in the distance learning environment as they do in the traditional classroom. They need no modifications. Other student activities, such as student presentations, can work very well with some minor modifications. Occasionally, there is a student activity that does not transfer well to DE. That activity, if not modifiable, should be replaced with a workable activity. Therefore, instructors need to examine their student activities carefully, revising those that need modifications and replacing those that are not adaptable.

In lieu of lectures, instructors can use a variety of student activities that help the students interact with the instructor, the course content, and each other. Besides the active learning strategies listed above, Frino, Klivans, *et.al.*, (1996) suggest incorporating background knowledge probes, concept mapping, minute writes, listening teams, surveys, and opinion polls. Instructors may devise learning games or other creative activities to engage students with content.

Build in Collaborative Learning Activities

A successful distance education learning experience requires collaboration. Students at a single remote site collaborate with each other in small group sessions, during before and after class networking, and often for class projects. However, in order for a DE class to feel like a “class” despite the separation, students need to communicate and collaborate across the distance. The on-line environment facilitates the collaboration. Students can complete peer reviews via email, listserves, or groupware. Students can work together to make recommendations on a case study. And students can even complete collaborative project assignments and presentations based on those assignments using on-line resources. Web Quests are another example of well-structured, collaborative learning activities easily adapted to any grade level and any discipline. Bernie Dodge explains the value of WebQuests and how to structure them at this URL: <http://edweb.sdsu.edu/webquest/webquest.html>. At the conclusion of such activities, students often observe that even though they worked with people they have never met, they experienced class collegiality.

Simplicity, Preparedness, Flexibility

A well-delivered distance education course rests on the preparedness of the instructor. The instructor who considers the distance learning challenges and opportunities afforded to both students and instructor and adjusts for those creates an enriching as well as enjoyable experience for all involved even if some glitches occur. No distance education class ever runs perfectly. The instructor’s ability to remain flexible and adapt to quickly changing conditions while maintaining a sense of humor will help the students do the same. A well-designed lesson as part of a well-adapted course will look simple yet have the behind-the-scenes complexity that successful educators know exists whenever learning is effective. A successful distance learning instructor plans early and plans often.

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Appendix A

Designing Instruction for Distance Education A Worksheet

1. Assess student needs
What outcomes are needed at the end of the class?
What skills and knowledge do the students already have?
What knowledge and skills are necessary to meet the outcomes?

2. Specify course goals Goal: a broad, encompassing view of the course outcomes. <i>Example: Students will improve their writing by using sentence variety.</i>
Goal 1
Goal 2
Goal 3 (add more if needed)

3. Specify course/unit/lesson objectives Objective: a detailed, measurable or observable explanation of what learners will be able to do after the instruction. <i>Example: Given information on the three types of sentences, learners will be able to construct sample sentences of each type with 100% accuracy.</i>
Objective 1
Objective 2
Objective 3 (add more if needed)

4. Determine content

What specifically must students know to meet the course/unit/lesson objectives?

How will content be divided into meaningful lessons?

5. Determine instructional activities

In each lesson, how what instructional strategies will be used?

In each lesson, what instructional materials are necessary (slides, job aids, handouts, worksheets, etc.)

What technology is needed?

What will take place outside of class before the content is covered; after the content is covered?

6. What is the back-up plan?

7. Plan delivery

In each class, how much time will be spent on each activity?

What materials need to be used/distributed when?

8. Deliver the lesson

Briefly jot down your assessment of the delivery.

9. Assess outcomes

Were the objectives met?

How do I know?

10. Evaluate the lesson/unit/course

What worked?

What needs tweaking?

What should be added/deleted?