

Teaching with Videoconferencing: Lessons Learned

produced by the
Oregon Technology Infusion Project

This is a compilation of lessons learned over one year period (2000-2001) of teaching some 9 distance learning classes via videoconferencing. Some classes were point to point (just between two sites), while other classes were multipoint (between 3 sites). Please note that the categories are not distinct. While a lesson may be listed under information flow, it may also pertain to planning. However, they are only listed once under the major category.



Planning

- ✿ Use matrix to lay out flow of information. The goal is to make the technology transparent and the curriculum seamless. The following matrix has a list of possible activities down the side and a list of educational technologies, including textbooks, across the top.

<http://terra.chemeketa.edu/faculty/lucy/matrixvid.htm>


To see what one instructor did with the matrix when planning an online reading class, see

<http://terra.chemeketa.edu/faculty/lucy/rdmatrix.htm>

- ✿ Have a plan ahead of time regarding how work is to be turned in and if and how it will be returned to students.
- ✿ You must plan well in advance for the time difference if work is to be mailed and returned.





Teaching


- ✿ Decide how you want to deliver information:
 -  *Via lecture*– be aware of the “talking head without commercials” syndrome. Create an active environment with lots of visuals and interactive participatory questions. Listen for students to ask questions, instead of talking through them.

Usually questions are very tentative and if the student is not on camera, you may miss the shy request for clarification.

Some teachers have made note guides for students. This is very helpful for courses with lots of technical vocabulary. The students then have a guide for the lecture with the technical terms already filled in. These guides are printed on the left side of the page, leaving lots of white space on the right side for students to take notes.


 *Via textbook* – students need to know that they will be called on in class to give feedback from their readings. In some classes, the textbook provides the information data for the course and the class is used to illustrate this with case studies and examples.


 *Via web pages* – Many teachers are now adding more information to the web page, for things that they do not have time to cover in class. Students need to know that they are still responsible for this material as well. Some teachers add links to professional organizations, pamphlets, and lessons plans that students can use in the classroom

 *Via web conferencing* – with multiple students at multiple sites the videoconferencing time goes quickly. In order for all students to have a chance to get their questions answered, instructors are using the web conferencing discussion forums. If students are unaware of this, they miss much of the feedback.

✿ Air time for activities - decide how you want to use your video air time:

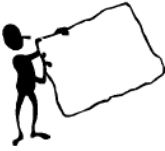
 Small group discussions at each site.

 One site prepares questions for other sites to see who gets the answer first. The originating site gets to say whether or not the answer is correct or incomplete. If the answer is incomplete, they may ask the question again, so another site or person can give the full answer. This has worked very well in reviewing for tests.

 Individuals call on another student at a different site. The student at the remote site may answer individually or get collective help from the site, a la Family Feud.

✿ Use air time for motivation and the affective. Emotionally charged issues are best dealt with live video.

- ✿ Up front and personal is an important concept to bring the class together. Use close ups on speakers both locally and at remote sites. Don't let students hide from the camera.



From the teacher's point of view

- ✿ Set teacher's camera to close up for a feeling of personal attention for the remote students.
- ✿ Teacher should look directly into the camera to talk to the remote site.
- ✿ Change back to teacher from the Elmo. Limit the amount of time on the ELMO without the teacher in view. 10 minutes maximum without the teachers or students on camera.
- ✿ Teacher must put mike on right side up or voice will be muffled.
- ✿ Need to wear clothes with waistband to hook on battery pack or be prepared to carry the battery pack around in your hand.



Learning from the student's point of view

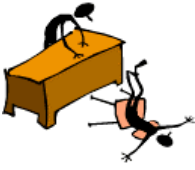
- ✿ Remote students need to be taught how to react to questions and how to interact on the TV. In other words, they need to learn to nod their heads yes or shake their heads no, when asked a question. Yes, the teacher CAN see them.
- ✿ If remote sites are using an open mike, have them turn it off during lecture or until they want to speak.
- ✿ Require remote sites to use the remote for close ups of students speaking. Do not allow students to speak off camera, unless there is a specific privacy reason.
- ✿ Require student interaction at remote sites.
- ✿ Encourage students interacting with other students at different sites. Called the "let's ask Mikey" phenomena.

- ✿ Require local students to use the mike. Just because the teacher can hear the question does not mean that the remote sites can. It leaves the remote sites out of the action and out of the class.
- ✿ All students can pick the mike up and speak into it. They do not have to lean into the mike on the table. Actually just pressing the mike and sitting up straight is sufficient for the sound to come across to remote sites.



Classroom Management

- ✿ Make 4X6 cards of students' names at remote sites and color code for them for each site.
- ✿ Call on students by name at remote sites. Once a student has answered, turn card over for ease of attendance taking.
- ✿ Make 4X8 cards folded lengthwise table tents for students in local class.
- ✿ If I did this again I would require distant sites to color-code all work turned in. Perhaps a blue cover sheet on all local papers, a yellow cover sheet for all distant sites, etc. Despite my best efforts to not confuse what papers were to be separated and mailed to different locations, I made mistakes delaying feedback to students. The class was too short to learn all the names and locations of students to make sure I didn't make this mistake.
- ✿ All correspondence (email or snail mail) should have been labeled with the student's name and their location. I should have made this mandatory in the beginning but I didn't.
- ✿ Let local class know when to pay attention. Sometimes they think that the teacher is speaking ONLY to the remote site and then they can talk and not pay attention.
- ✿ Use an audio cue to bring the group back together after individual group activities. We tried chimes, but that was too soft. We tried a whistle, which was too loud. What worked best was a synchronized clap that was repeated by the remote sites to indicate that they were ready to return to the whole group.



Classroom Arrangement

- ✿ Best arrangement is teacher in the middle with students on each side, so that the teacher's back is not to the local students when facing the camera. Next best scenario is to have the teacher sit on the side turning to face the class and then to face the camera for the remote students. Use a U-shape and replicate this at the remote sites. To see an almost seamless circle of tables from remote site to originating site, see

<http://terra.chemeketa.edu/faculty/Education/ed217/week6/rogue.htm>

- ✿ Pre-set mikes with cameras and cluster students around the mikes.

- ✿ If possible, send signal through overhead projector to movie screen instead of 2 small TV sets, so that the remote sites can see the originating classroom up front and personal. View the movie screen instead of TV at :

<http://terra.chemeketa.edu/faculty/Education/ed217/week6/rogue.htm>

- ✿ For the whole class picture, see the remote site on the screen in back of the local students. Then you can see why a screen is better than a tv monitor.

<http://terra.chemeketa.edu/faculty/Education/ed217/week6/rogue.htm>



Establish Communication Flow

- ✿ Provide Cohort Coaches at each remote site during the whole class session.
- ✿ Establish Site Contact: name, tel #, fax #, mailing address, email address.
- ✿ Establish Proctors and when they will be needed: at the beginning of class, at the end of class (cohort coach can serve as a proctor).
- ✿ Establish how to mail in assignments: overnight?, second day? online?
- ✿ It was nice to have some things mailed to me so I wasn't tied to the computer screen when reviewing it. But I wasn't adequately prepared to return the work (i.e., to homes? to sites? how do I protect student confidentiality when I'm sending a mass mailing, etc.).

- ✿ you must plan well in advance for the time difference if work is to be mailed and returned. For example, it's not enough for me to get the assignment in a timely manner if I've got to grade it and return it in time for feedback to be applied to an upcoming assignment. Use of overnight mail, (although more expensive) by both myself and the distant sites was critical in a couple of situations.
- ✿ Establish whether or not to use email or the web conferencing. . Use of both email feedback and feedback on the actual assignment worked well for me.
- ✿ If web conferencing, establish where the students should put the questions: in the questions for instructor conference or in their individual folders.
- ✿ Make sure that you have access to an outside line in the classroom to call remote sites and for emergencies to have the remote sites call you.
- ✿ Do face to face orientation for each remote site, if possible.



Companion Web Site

- ✿ Because of the extensive website support provided I assumed everyone would consistently be accessing the internet for information, announcements, handouts, etc. I didn't realize until the end of the class how little many of the individuals used the website; a few didn't even have web access. Next time, I would mandate that people partner up with a buddy; one of which had to have consistent access to the web. This buddy would be responsible for filling in the partner if class was missed or web access was needed. It would have been more efficient than everyone coming to the instructor for minor concerns. Some students do this automatically, many do not.
- ✿ Have a policy ahead of time and share the first class regarding expectations for what students are responsible for off the website if available. I didn't do this and after a few classes and "sad stories" I felt I couldn't mandate the use of web site resources for additional researching; I was left with only providing suggestions.