

# **Faculty Guide to Teaching through Videoconferencing**



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# Faculty Guide to Teaching through Videoconferencing

## Introduction:

Videoconferencing (or video teleconferencing) is the synchronous two-way connection of two or more locations through audio and video equipment. Many Penn State faculty are using videoconferencing as a method of extending their classrooms to students at different locations. Of all the distance teaching technologies, videoconferencing is the most similar to classroom instruction. However, there are a few key differences in the teaching and learning process that require attention for faculty and students to use videoconferencing successfully.

The purpose of this guide is to be a pedagogical primer for faculty who are relatively new to using videoconferencing to teach a course. This guide contains a list of questions that have been asked by faculty along with suggestions and examples provided by experienced videoconferencing instructors. These suggestions were supported based on research in the field of distance education.

This guide does not go into technical details on operating videoconferencing equipment since each setup has a unique set of features and controls. Information Technology Services has a good technical overview of videoconferencing systems (see <http://its.psu.edu/videoconf/detect.htm>). For a list of other technical and research resources, please see the “Additional Resources” section at the end of this document.

## What should I do before my first class session?

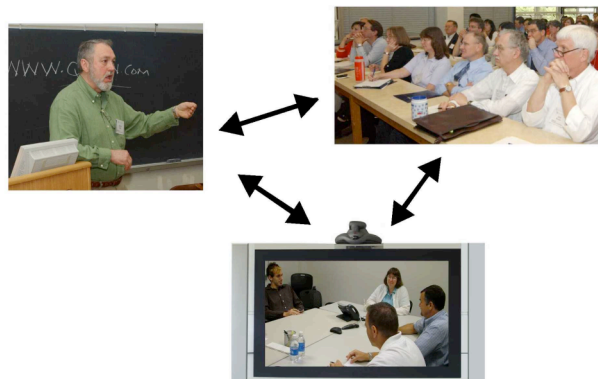
- Become familiar with the equipment and learn to operate it without assistance. Even if a technical person is available for all of your class sessions, learning how to use the equipment will enable you to think of the best ways of using the available equipment.
- Run a test session with the location or locations that will be connecting to your classroom so you are sure that all of the remote sites have the right setup. The most common setup problems involve lighting issues (too dark, washed out, glare), and microphone placement.
- Compile the contact information for technical people at the remote location, just in case something goes wrong. Have the technical contact provide training to your remote students so they know how to use the equipment.
- Prepare a videoconferencing etiquette summary for your students so they know not to tap their pens on the table, shuffle papers, place materials on top of the microphone, as well as when they should mute their microphones and how you would like them to interact with the rest of the class.
- Have a backup plan in case the technology fails. A good option is dialing into a speakerphone at the remote location so you can continue your class without much of an interruption.
- Until you become comfortable using the videoconferencing equipment, go to the classroom 10 minutes early.

## How do students get access to materials such as handouts and PowerPoint slides?

- Send your materials to students ahead of time by posting them to the ANGEL space for your course. Remote students should be told to check that space before coming to class and bring a copy of the materials with them, either on a laptop computer or by printing a paper copy.
- If the remote location has a computer and projector, have a designated remote student show a copy of the presentation as you're showing it in your local classroom.
- Many videoconferencing units have a document camera attached. This lets you send an image of a physical document, however the image is not as readable as a printed document.
- If your remote students need a physical copy of a worksheet that you have changed at the last minute, you may be able to go through a staff assistant at the remote location to print and distribute copies. Make sure you have this arrangement worked out ahead of time.

## What is the best way to arrange the room?

- If you are mainly presenting information to students, then position the videoconferencing unit in a location where the camera can get the best picture of you and your materials. Be sure to consider glare when positioning the videoconferencing unit.
- If you are planning any kind of class discussion and the seating is mobile, you may want to arrange the student seating, videoconferencing unit, and your position in a triangular formation so each party can see the other without much difficulty.



## How can remote students be encouraged to ask questions and participate in discussion?

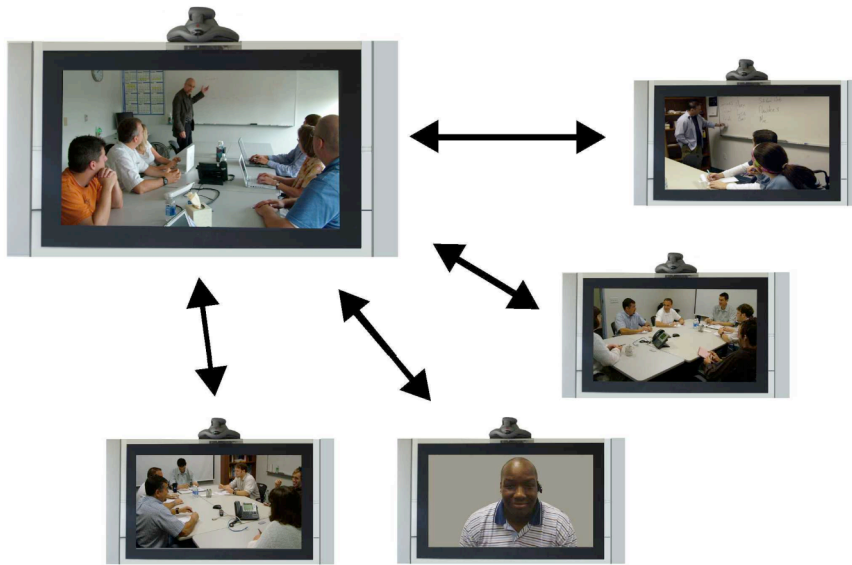
- Let your students know the protocol for asking questions. Do you want them to interrupt you as you're speaking (with a question or a raised hand) or will you allow certain times for questions?
- Learn the names of your remote students and ask them discussion questions directly.
- Give the remote students seed questions to ask in class to kick off a discussion or to periodically lead the class in the discussion of a particular reading or case study.
- Let remote students mute their microphones and have their own course-related discussion. Some instructors dislike this practice, but it can help the remote student group form a support community.
- Remote students may have trouble jumping into a heated classroom discussion since body language that indicates that they want to speak is less noticeable. The audio and video signal may also be delayed by a second or two, which makes students feel out of synch with the main presentation. Go out of your way to give them the opportunity to present their views.
- Small group discussion activities with a report-out time encourage students at all locations to discuss a topic and express their thoughts. They also give students a break from passively watching a presentation.

## How do I deal with remote students who say that they feel isolated from the rest of the class?

- First and foremost, make sure you can see the videoconferencing display. Perform visual checks to make sure that the remote students are present and paying attention.
- Use e-mail or ANGEL to communicate with your remote students so they have an opportunity to access you outside of class (in lieu of office hours).
- If you want to encourage student-student collaboration, create a contact list for each location and use name tents so students learn the names of everyone regardless of their location.
- If possible, travel to the remote locations two or more times during the course and teach from that location. The first time should be close to the beginning of the course and give students a chance to meet with you in person and discuss any concerns they have. The other visits should be centered on critical points in the course, such as exam preparation or project reviews.
- See if your remote students can come to your main location two or more times during the course. The first time should be close to the beginning of the courses. Subsequent visits can be for proctored exams or student project presentations. If students make the trip, give them time before or after class to meet with you and socialize with the other students.

## **I have three (or more) locations joining class through videoconferencing. How do I moderate the conversation?**

- Before beginning a discussion, start with some quick ground rules such as “Let’s start the conversation with the Altoona group, and then we’ll move to Fayette, Hazleton, and University Park. As questions come up, write them down so you’re prepared for your turn.” This order is easy to remember since it is alphabetical by location.
- If you have computer access at each location, you can run an Internet-based chat (such as AIM or the chat tool in ANGEL) in parallel to your discussion.
- Select one moderator at each location to submit questions via the chat tool. A moderator at your location can alert you to a question that comes up so you can give time to that group of students. The moderator role should be rotated among students so one student doesn’t become the “gatekeeper” for his or her group.



## **How do I manage teams in a class with remote students?**

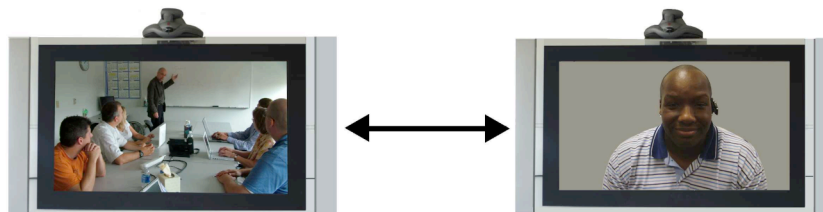
- If you have enough students at each location, then form teams based on location. This enables all teams to meet with each other in person.
- If you have several teams with people who are all in one location and one or two teams who mix local and remote students or different remote locations, then you may have to give the mixed team an extra week to complete their assignment (depending on its complexity) to account for the additional complications of coordinating group activities at a distance. Make sure this is understood up front and ask for volunteers to participate on the mixed team(s).

## **What do I do if I notice an “us versus them” attitude forming among students at different locations?**

- This can happen when a group of remote students forms a cohesive unit. They may have their own discussions and come to a consensus that is different from other groups of students (Wainfan & Davis, 2004). This is where small group discussions can play a part to build consensus between all locations if that’s what you want.
- Try using the discussion tools in ANGEL to have each location or student team post summaries of their discussions. This gives students open-ended time to continue the discussion and provide supporting evidence.
- The “us versus them” attitude can be used constructively as the basis for healthy competition. Have each location focus on a particular aspect of a controversial topic and then hold an inter-location debate.

### What do I do when there is only one student enrolled at a remote location?

- In this case, the student often feels like an intruder and can fall into a passive observation role. Instead, treat the student like a special guest. Greet him or her at the beginning of every class, stay in contact through e-mail, and arrange special times when he or she can call you in place of a physical visit during your office hours.
- You may also want to assign a local student as a study partner to help keep the remote student engaged and connected to the rest of the class.

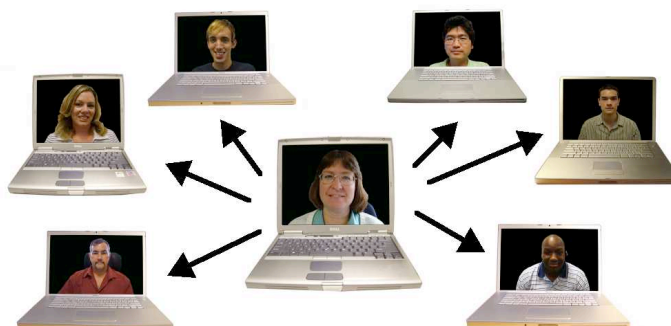


### What do I do when remote students need to present to the rest of the class?

- Make sure students understand how to use the equipment at their location.
- Students should do the same kind of materials preparation that you have done, such as sending handouts and presentations to all locations ahead of time. A modified version of this guide or a preparation checklist will be helpful.
- If possible, reposition the videoconferencing display so all students can watch it comfortably. This will also encourage local students to ask questions.

### What is desktop videoconferencing? What is Breeze? How is it different that other kinds of videoconferencing?

- Desktop videoconferencing uses computers and personal video cameras to connect two or more locations. Breeze (an Adobe product) is one brand of desktop videoconferencing that includes audio, video, chat, a presentation area, application sharing, and discussion-moderation tools. Penn State is doing a pilot of Breeze (see <http://meeting.psu.edu>).
- In most cases each location has one or two participants and there can be dozens of interconnected sites. The more people and locations that are connected, the more critical it becomes to have a moderator who can watch the chat window and raise questions to the presenter. If students are used in the moderator role, that duty should rotate through the class to balance the extra workload.
- Each site participating should be given the opportunity to check their ability to connect to the videoconference before class begins.
- For the highest quality audio and video signals, students should be connected through a high-speed (broadband) connection. A dial-up connection is not sufficient for sending a smooth video signal to the rest of the class.
- If students are using the audio feature to talk to the rest of the class, there is a chance that their microphone will pick up sound from their speakers and create an echo. In that case, recommend that all participants wear a headset with a microphone while participating in an audio discussion.



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## **Additional Resources:**

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