

Videoconferencing Instructor Manual



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Foreword

The purpose of this Videoconferencing Instructor Manual is to familiarize Adelphi professors with the steps necessary to employ this technology into their teaching. This document answers questions instructors may have about videoconferencing, providing guidance in both the pedagogical and practical issues an instructor will encounter in this process.

1. Why Videoconferencing?

Let us assume you are asked to teach a course by your Dean that may involve classes at two locations, or wish to connect with a guest speaker. By using videoconferencing (VC) technology, two or more groups at disparate sites can hear and speak to each other at the same time, sometimes sharing computer applications for collaboration. This rich communications technology offers new possibilities to Adelphi University for the purpose of instruction, connecting with experts and outside programs, professional development, and community forums. This interactive, two-way medium allows participants to “almost be there” without having to negotiate the complicated logistics of transporting persons to a distant program site. With the growth of satellite campuses, Adelphi can link two classrooms at one or more locations with the same instructor.

Some of the other benefits of videoconferencing include:

- ✓ Linking satellite campuses with instructors
- ✓ Appeal to a variety of learning styles using diverse media such as video or audio clips, graphics, animations, computer applications
- ✓ May eliminate or reduce travel
- ✓ Improving participants presentation skills
- ✓ Increases resources in the classroom
- ✓ Learning new communications technologies.

2. How can I use Videoconferencing for my classes?

Primarily, videoconferencing will be used to connect two Adelphi remote locations. In addition, some examples of other uses for this technology may be:

- an English class speaking with the author of poetry they are reading
- a biology class taking a virtual field trip to marine institute
- a collaboration (e.g. Knowledge Workers Educational Alliance) or cooperative learning between schools via a multi-point conference
- students enrolled in education courses can observe teaching practices in classrooms
- a political science class can conduct a moot court competition with another school, or
- an evaluation of social work or nursing students at their required field site placements.

3. What are the first steps?

In order to have a successful videoconference, it is imperative that all parties to the conference are informed as to their roles and responsibilities. By its nature, videoconference requires some planning, coordination, scripting, training and testing for things to work well. But what are some of the first steps an instructor needs to take? Some of the major questions [figure 1 below], are answered in this manual, and will help to ensuring successful videoconferencing.

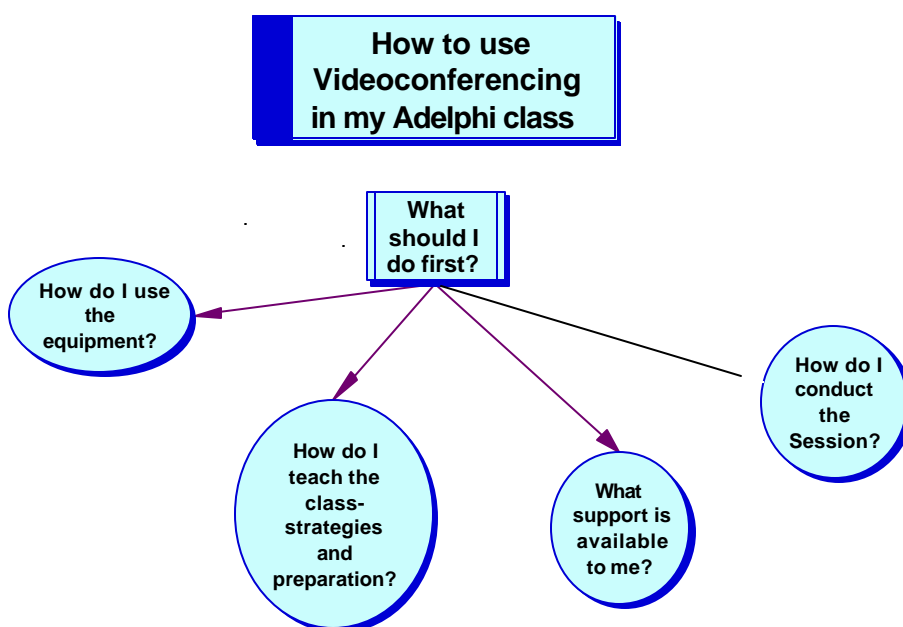


Figure 1

As a first step, if an instructor is seriously contemplating using videoconferencing in his/her class, they should contact FCPE (X4221) to get the process started. The FCPE will provide documentation, training, and information to help you use this technology effectively in your class. It is highly beneficial to arrange a meeting of all principal parties (IT department, instructor, FCPE) to make sure everyone knows their roles and what expectations can be realistically met. This meeting should take place a few months prior to the start of the semester in order to have sufficient time to address all issues.

4. What must I know in order to teach using VC?

This section reviews the nuts and bolts of using videoconferencing in the classroom.

a. What Classrooms are available?

Currently there is only one “smart classroom” that can be used for videoconferencing on the Garden City campus, residing in Business building, room 209. A second room (Business 108) is planned for the fall 2002 semester, plus an additional room at a new satellite campus in Hauppauge. Due to problems with room availability, it is important to schedule the room via the Registrar for a VC well in advance of the date.

Each device on the network is assigned a specific IP address. At Adelphi, our high speed bandwidth (T3 lines) carries the data between devices which are assigned the specific addresses below. The current and planned VC sites at Adelphi, with their respective seating capacity include:

Garden City:		IP Address
Business, 209	40 students	(10.83.4.35)
Business 108	50 students	(10.159.4.36)
FCPE-Class	14 students	(10.80.4.108)
FCPE Breakout	10 Students	(10.84.4.20)
IT (Business basement)		(10.80.5.50)

Outside Garden City:

Manhattan Center	30 students	(10.160.1.25)
Hauppauge	30 students	(10.161.4.35)

b. How would a videoconference be conducted? What would it look like?

Videoconferencing can be incorporated into a class in several ways.

The first way is simply to have a remote site (e.g. Manhattan Center) where you'll be simultaneously teaching a class with your Garden City class. You might want to videoconference every week all your lectures and supplement the lectures with Blackboard (E-learning environment) notes and discussions, and e-mails. You may wish to designate a student or graduate assistant to help facilitate classroom exercises and discussion at the remote site. In essence, this method allows for the traditional instruction methods at two sites.

A second method is a variation of the first, namely to VC half (or a portion) of your lectures, and conduct the remaining classes in an online teaching

environment (Blackboard). In this manner, your class would receive the benefits of synchronous and asynchronous learning.

A third method is the ad-hoc videoconferencing request. This might involve an event or special guest speaker for one or two classes in a semester. In this approach, VC is used as an adjunctive method to enhance some aspect of the course with a live interview or such. Another type of ad-hoc request might be a non-class related meeting with other research/teaching fellows at other universities, or a conference that uses this technology. These ad-hoc requests must be properly scheduled in advance to ensure that the connections can be made successfully and that the appropriate rooms are available.

C. What Support is available?

The IT department is responsible for ensuring all videoconferencing equipment, lines, and multimedia rooms are in working order, and sufficient back-up procedures are in place in the event there is a problem. All this work needs to be done well in advance of the semester beginning in order that there is time for proper testing.

Instructors need to be trained in both the mechanics of operating the videoconferencing equipment (IT department), as well as in the pedagogy that goes along with the technology (FCPE). The FCPE will work with the professor to explain effective instructional strategies, as well as the logistics of the various cameras and equipment. In addition, staff from the FCPE can videotape the second class (or class of instructor's choosing) at both ends of the videoconference. In this manner, the professor can get immediate feedback on how their class is going, and make any adjustments to their instruction as needed.

A technician at the remote site may be provided for the first videoconference if the instructor requests. A remote site facilitator, like a graduate student can also help the class at the remote location. The need for trained technicians to support videoconferencing cannot be underestimated. If the instructor is comfortable with the technology, handholding can be minimized. However, for ad-hoc requests, and for the first initial classes, support personnel will be needed. In time, when we know the equipment, lines and back-up systems are stable, this full-time support technician can be phased-out of being physically present for each videoconference session.

5. How do I use the VC equipment?

The current equipment at Adelphi includes a Polycom Viewstation(s), T1 connection (dedicated bandwidth) between campuses with backup line and speakerphone. At remote sites (non-Adelphi) all videoconferencing equipment must adhere to H.323 standards, and be tested prior to class.

The actual setup of each videoconferencing room is unique to that room. Typically there would be a camera situated in the front and rear of the classroom in order to see the instructor and students. Prior to a professor teaching in a particular class, it will be necessary to familiarize himself with the room setup and equipment. Here are the basic steps—which will vary with each room:

a. Start up procedure:

Make sure the camera and VC unit is on.

If you are at another location, be sure the Polycom camera is turned on via the switch behind the camera.

Turn the projector or TV monitor on.

Polycom logo will first appear and transform into starting menu.

Note: In **Business 209** the cameras are always on.

You would then start the projector by pressing the ON/Off switch on the control panel on the front wall near the white board.

Next, press Video on the control panel.

Open the lower cabinet door and change the VCR channel setting to “L-1”.

The Polycom main menu should be projected onto the screen.

b. Using the Polycom remote and placing a video call

Note: The remote control, which looks like a TV remote, is an integral part of the Polycom system. The yellow “Info” button when pressed will provide a basic description of all the buttons on the remote control.

To place a video call, on the main screen, highlight the Video Call icon and press the Select button (the center button between the directional arrows)

Then use the numeric keypad to enter the IP address, like 150.108.155.124

Note: The period key is the right arrow key.

Press the green button on top of the remote to place your call.

You should have a connection. If not--- try again.

If the call does not complete, you will get an error message. If you are calling outside Adelphi—to a non- Adelphi site, be sure you have made arrangements to with the IT department to permit calls to go through (the firewall) for your specific IP address.

If the call is internal to Adelphi, and not working, please call X3333 to receive technical support. (or Steve Filipelli X3038).

c. Answering a video call

The Viewstation is set by default to automatically answer incoming calls. This would be true if calls are coming from another Adelphi location however, all calls from a non-Adelphi source will need to have the IT department make arrangements for the call to go through Adelphi's firewall. A help-desk ticket must be started (X3333) for this purpose.

d. Adjusting Cameras (Near and Far)

To adjust the camera, press the Near button on the remote control. The full-screen mode will be displayed (Camera icon appears on the upper right screen pointing towards you). Use the arrow buttons to adjust the camera from side to side and up/down, and the zoom buttons to zoom in and out.

To move camera in the distant location, press the Far button on the remote control. The far site's camera will appear in full screen mode (Camera icon will display with camera pointing away from you). Use the arrow buttons on the remote control to move the camera, and the zoom buttons to zoom in and out.

Note: By pressing Near at this point, you can see both the far and near (picture in picture) sites for this call.

e. Adjusting Sound

The call volume on the Viewstation is related to the television monitor volume. To adjust the volume, press the volume controls on the remote.

The Mute button will mute local sound so the distance site would hear any extraneous noise.

f. Troubleshooting

There are many issues that can come up during a videoconference. What is covered below are the most common.

--Can't connect to remote site: May be line problems, or the equipment at the remote site not being turned on. Call remote site contact or call IT help desk X3334.

--Connected to remote site but no sound: Try pressing button on the multi-directional microphone. If this doesn't work, be sure the far site hasn't muted their sound (an icon with a microphone crossed out will be present). Ask for the far site to press their mute button.

Also, be sure the speakers are connected and the volume is turned up.

--Echo is heard from the far site—Have the far site turn down the volume of their speakers, and have the microphone placed away from the speakers.

Much of the troubleshooting must be done well before the class begins, in close cooperation with the IT support staff.

6. Teaching with Videoconferencing

Our initial experience with videoconferencing at Adelphi involves linking satellite campuses (resource sharing) in Soho, Hauppauge and other sites as they become available (see Appendix A for description of Dr Mullin's class). To date, there have not been ad-hoc requests for remote speakers, virtual field trips, professional activities or community events, but these are quite do-able given the right program. The issue then becomes, how is teaching different using VC in my classroom, and what adjustments should I make for this technology?

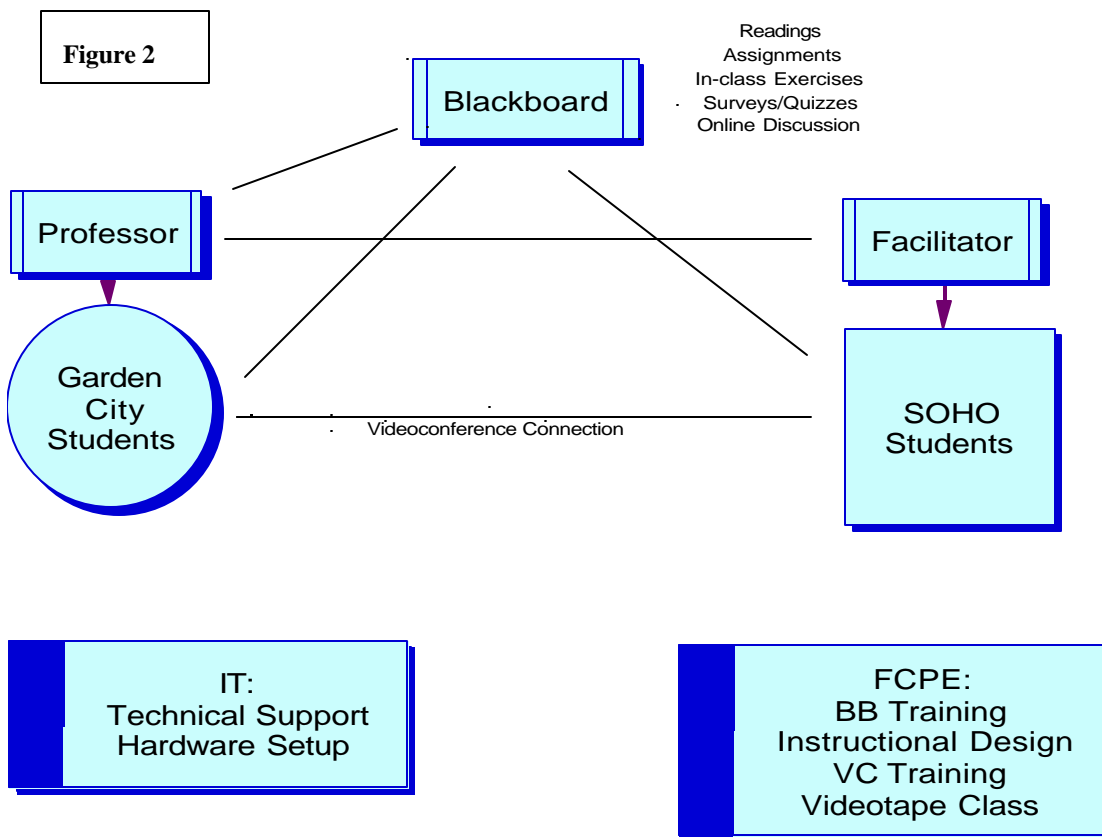
A. How do I prepare teaching materials?

Instructors prepare their class materials as they would for any class, except that there may be additional preparation time needed to ensure that students (and facilitator) at the remote site are fully engaged in the learning process. Attention needs to be paid to coordination between the instructor and facilitator at the remote site. It may be useful to write a rough script for your class, and what will happen at the remote site.

The FCPE can help with instructional strategies (see subsequent sections) and with designing the Blackboard component for the class/course. It may be advisable for the professor to visit the remote site at least once in the beginning of the term, in order to test the logistics of the videoconference, e.g. camera presets, camera angles, and sight lines.

In addition, you have the capability of showing a video, instructor computer screen and other source inputs depending on the configuration of the room. Whatever the local source is, will be transmitted to the remote site, and the instructor can switch back and forth between the camera, video, PowerPoint presentations etc. The instructor needs to allow for more planning if several media will be incorporated into a lesson, and he/ she will need to know the capabilities and use of the classroom.

Videoconferencing Model for Adelphi



B. What teaching model can I use during a videoconference?

Figure 2 above outlines the basic components of a videoconferencing model, which is described in this section. Effective use of videoconferencing technology for interactive learning requires practice and planning as well as attention to a few important instructional strategies. Using effective interaction and feedback strategies will enable the instructor to identify and meet individual student needs while providing a forum for suggesting course improvements. Toward this end, the model recommends a facilitator, Blackboard usage, advanced organizers, videotaping a class for instructor feedback, and interactive strategies for engaging students.

A **facilitator** at the remote site is highly recommended. This facilitator can be a graduate assistant, teaching assistant, co-teacher, or any other arrangement that the department and instructor deem acceptable. The facilitator needs to be informed exactly what will be covered in each class, and what his/her expected role will be. Typically, you may assign a facilitator to run group activities and report back on the group's progress. The facilitator can be the "eyes and ears" for

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the professor, as well as helping with any communication issues between sites. In addition, it is advisable for the facilitator to have basic working knowledge of the videoconferencing equipment in order to assist in adjusting a camera or turning on the equipment if the need arises.

It is highly recommended that **Blackboard**, an online learning environment, be used to supplement class activities, particularly to foster “classroom communities” via discussions, virtual office hours, online testing, and group projects. Blackboard can be used to distribute course materials, for tests/surveys, and for building group cohesiveness via collaborative tools. For example, as part of the homework assignment, you might have students read online class notes and in-class exercises via Blackboard in advance of attending the class.

Use these **pre-class study questions and advance organizers** to encourage critical thinking and informed participation on the part of all learners. Suggest students bring these materials to class as an aid to note taking. Students are then more likely to be prepared for the planned group activity, which may include a group exercise or discussion.

Two critical components of the model are services supplied by the **IT (Information Technology) department and FCPE**. Currently, IT ensures that the videoconferencing technology, lines and projectors are operational, and that for the first few classes, a technician is present. After that, procedures have been worked out to make sure that someone is on-call to assist. The FCPE will help train the faculty on the equipment, Blackboard, and instructional strategies to use the technology. Both of these supporting teams are there to assist faculty when needed.

There is a tendency when people watch TV to be very passive, which is a mode to which students at the remote site can easily succumb to. To avoid this, make group activities **engaging and interactive**. Suggested approaches include:

- Know names of students, and call on individual students at remote site with questions in order to ensure participation by all, and discourage individual students from monopolizing class discussion.
- At the first class, have a frank discussion to set rules, guidelines, and standards for class conduct during a videoconference. Insist that students take an active role and participate in class discussions.
- Use the remote site facilitator as your “eyes and ears” to detect any students who are struggling or having other problems.
- Develop strategies for student reinforcement, review, and remediation. Towards this end, one-on-one phone discussions, e-mail, Blackboard virtual office hours are tools that can be especially effective.

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- Add some interactive elements like a Flash animation or simulation, exercises, theatrics, visual effects, case studies etc. may dramatically improve the conventional “talking head” type of videoconferences that we are all too familiar with.
- Use Blackboard surveys and quizzes to elicit student feedback throughout the course and determine learning effectiveness.
- Use Blackboard (online learning environment) to supplement class materials and foster group cohesiveness between sites.

Note: The FCPE is ready to assist faculty in using Blackboard and suggest other teaching techniques to engage students.

C. What other pointers or strategies are useful?

For the most part, effective distance teaching requires the enhancement of existing skills, rather than developing new abilities. Faculty need to pay special attention to the following:

- Realistically assess the amount of content that can be effectively delivered in the course. Because of the logistics involved, presenting content at a distance may be more time consuming than presenting the same content in a traditional classroom.
- Be aware that student participants will have different learning styles. Some will learn easily in group settings, while others will excel when working independently.
- Diversify and pace course activities and avoid long lectures. Intersperse content presentations with discussions and student-centered exercises.
- Be prepared for technical glitches with handouts or some type of backup plan. Don't let some inevitable glitches throw off your lecture.
- Bounce ideas off FCPE staff and others interested in distance learning at your institution. In this manner, a best practices group can develop instructional strategies further than a lone instructor.
- Encourage students to interact among themselves via online discussions and group projects in order to foster class cohesiveness.
- It may be necessary to repeat a question so that the remote site can hear it, and minimize the time where your back is to the camera. It takes some time to adjust your movement so that you can see the remote sites, and both they and your local class can see you.
- And finally...relax. Participants will quickly grow comfortable with the process of distance education and the natural rhythm of effective teaching will return.

d. What about assessment?

Any new technology needs to be evaluated for efficacy. Such evaluation may take place in the first few weeks, mid-semester, and prior to the semester ending. All instructors, class facilitators, and students should be surveyed to document and resolve any issues, and in order to improve future videoconferences.

Blackboard can be used to do quick and effective pre-class/post class surveys as needed. For example, you can have check off boxes and ask questions about instructor effectiveness, etc. and ask some more open-ended questions like “What did you like about the videoconference? What did you learn? How could the presentation have been improved?”

The Faculty Center for Professional Excellence will offer to videotape your class in order for the instructor to assess his/her teaching strategies and effectiveness. These videotaped segments can be very useful in making adjustments early in the semester that would improve the experience for students and faculty alike.

For as long as this technology is new to Adelphi, it is recommended to have a post-semester meeting of all stakeholders to discuss issues, review evaluations, and plan for future classes. At the time when the technology is stable, such review may be phased out or done pro-forma via e-mail.

Appendix: A. Dr Mullin: Case Study

(Note: The article below was reprinted from the Fall 2002 Faculty newsletter)

Hitting Your Marks:” Distance Learning Initiative at Adelphi University

James Mullin is Assistant Professor in the School of Social Work, and is the Director of the Undergraduate Social Work Program. During the Spring, 2002, semester Dr. Mullin taught a course to students in Garden City and in the Manhattan Center using distance learning technology.

Adelphi University’s initial experience with distance learning occurred in the Spring, 2002 semester. A Social Work course within the MSW curriculum was taught by Professor James Mullin to two groups of students, one located in a classroom on the Garden City campus and another located at the university’s Manhattan Center. The two classrooms were linked through the use of synchronous technology, i.e. cameras and microphones, which permitted the professor to reach both in “real time.” This interactive process allowed both groups of students to have the same access to the professor, the same opportunity to ask questions, and the same exposure to the teaching/learning content.

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Throughout the course, class exercises were designed and incorporated to cause the interaction and cooperation between students at the two sites. Some class projects involved work performed and decisions made sequentially across the two sites. For example, one project required one group of students in Garden City to perform preliminary work and then “hand off” their results to the Manhattan students. The Manhattan students then utilized this information to complete their part of the project, and then referred their results to another group at Garden City. At the conclusion of this round of work, the product was presented to all students who then had to decide, collectively, on a desired course of action. This technique tested the limits of the equipment, and highlighted some of its limitations. However, the projects did proceed and, from the professor’s standpoint, succeed. These examples are indicative of the applicability of distance learning and the ability to create the semblance of “one classroom.”

A course-specific questionnaire was developed consisting of statements regarding the learning environment, the distance education technology, and the content of the course. Students at each site rated the degree of their agreement or disagreement with the statements on a 7 point scale. An additional two statements asked students to judge the breadth and depth of the material covered in the course as compared to “a traditional course.” Finally, students had the opportunity to identify, in narrative form, what they liked most and least about the course.

Collectively and separately, the students at both sites agreed that course objectives were achieved, they had ample access to the instructor, they were encouraged to interact with each other, the instructor responded to them to their satisfaction, and that they had the opportunity to learn as much as they would in a traditionally taught course. The Manhattan responses, of course, are of particular interest, given that Prof Mullin was present there for only 2 of the 15 classes. The fact that their views of the learning environment were positive and consistent with those of the Garden City students is testimony to the viability of a distance learning format.

The results of this experience in distance learning support the conclusion that it is an effective format that can become a part of Adelphi’s learning array. Both students and the instructor affirm that a learning environment that applies equally to both sites can be created and, through technology and teaching techniques, both groups of students can participate actively in it. A sense of “one classroom” can be approximated, if not achieved.

Appendix B: VC Site Preparation

A videoconference can have a greater impact on participants by additional planning at each site. Such planning may include some of the suggestions below, which are far from exhaustive.

Create a good learning environment— Prepare the room so that students are comfortable, can clearly see the screen, and can easily hear the instructor. Sound proofing and other room adjustments are often needed to create a good learning environment. These preparations need to be coordinated with the IT department.

Lighting—As part of the pre-test process, issues of proper lighting need to be addressed. Too much light, or insufficient light can make seeing the students or facilitator at a remote site problematic. With the use of shades, improved camera, and direct or indirect lightening, a poor picture can be substantially improved.

Familiarize yourself with all course materials, handouts, assignments. Maybe preparing a script could be useful so you can be in a position to assist the moderator, answer students questions, and prepare the audience.

Prepare the Audience—For any event, a little audience preparation goes a long way toward ensuring a smooth and effective conference. The site coordinator can hand out materials and get the attendees seated prior to “going live”. In addition, the coordinator can brief attendees as to the content and format of the conference, the time they can ask questions, and proper conference etiquette. Better yet, have attendees arrive 10 minutes early so enough time is allowed for setting up and getting the attendees ready.

Engage participants in the learning experience—Possibly some pre/post program learning activities or discussion, a local content expert or panel discussion, or other learning activities can add depth and enjoyment to the learning experience. And by all means, encourage participants to share their ideas and comments.

Appendix C. Day of Videoconference

On the day of the videoconference, several things need to be addressed:

- a. All equipment and lines need to be tested
- b. The remote site facilitator needs to know lesson plan, have materials for distribution, and understand role the role they will play
- c. Technical support persons must be present at remote site and initially at instructor site
- d. BB materials, syllabus, and class assignments must be posted.
- e. Instructor may need a basic script of class to get a sense of how much time is needed, what will be discussed, group work, handouts etc.
- f. Problem resolution procedures need to be in place with phone numbers to call, backup lines, and steps to take when problems arise.

Appendix D. Additional Considerations

- a. After the new rooms are setup, a videoconferencing demonstration to faculty needs to be scheduled in order that faculty can see the technology and think about incorporating it into their classes.
- b. For videoconferencing to be economically viable, eventually the use of technical support staff during classes will need to be phased out. This is a question that the administration will need to address.
- c. The viability of data sharing using T.120 protocols and MS Net Meeting software needs to be explored. For example, what is the best way to share a PowerPoint presentation with the remote site?
- d. Measure results. Assessments and other measures need to be in place prior to the semester to determine the effectiveness of the technology.

Allowing Experimentation—from Distance Education, by Carl Lane, Ph.D.

“Perhaps the best way for faculty to inspire teachers in training to use technology is to cast themselves as learners and experiment fearlessly in the applications of technology....

It is not necessary for all faculty members to exploit every technology in their classes. Nor is it necessary for faculty to reach consensus on how technology should be employed. The fact is that we are in the early stages of how technology can be used most effectively to support teaching and learning. Given the circumstances, it is best if many pedagogical approaches are tested, several theories of learning applied, and a variety of technologies used...Encouraging faculty to be reflective about their work and evaluate the results of instruction, can advance an important domain of knowledge, while building faculty competence.”

E. Adult Learning Research

Malcolm Knowles has written extensively about adult learning and choosing the appropriate media. He contrasts the pedagogical model, which revolves around teacher-directed learning, with andragogical model which is more collaborative, supportive, and mutually respectful. He describes the latter model as being processed oriented, rather than content oriented.

Three aspects Knowles believes contribute to this environment is Interaction, Task-centeredness, and Individualization and Self-Directedness.

Interaction, Knowles argues, is when learners are engaged interactively in the learning process, not merely passive learners. His theory lends itself to videoconferencing, multimedia, and CD-ROMs, and online discussions that allow learners to interact.

Task-centeredness is the quality that concerns practical aspects of learning, not merely learning theory. Adults need to see the usefulness of what they are learning to their lives for effective learning to take place, and retain more if they learn something naturally, through their own inquiry and research.

Individualization involves the concept that people are different in how they learn, their motivation and their learning styles and capacity. Standardized curriculum using traditional teaching styles is too limiting to engage many students. Options need to be offered that allow flexibility in pacing, content etc., which can be done via branching multimedia offerings.

Lastly, self-directness involves adults taking responsibility for their learning, and be encouraged to make their own decisions toward reaching their learning goals. This brings about learning contracts between student and teacher, with the teacher guiding learning, rather than dictating it.

It is a useful exercise to creatively think about engaging students with these criteria in mind.

F. Videoconference Pointers

A successful videoconference involves attending to technical, program, and logistical issues. Many of these issues are discussed below.

Conference Etiquette—Extraneous noise and talking by students are very disruptive in a videoconference. It is very important for the sites which do not “have the floor”, to mute their audio in order for the speaker to get the clearest sound. For most systems, there is a mute button in their teleconferencing software. Activating the mute feature will allow a site to hear the conference,

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without transmitting any background noise. The professor will be responsible for signaling which site gets the floor and establishing ground rules at the start of the videoconference. The more interactions between sites, the more structure is needed to properly conduct the conference.

Speaking Points--Students need to identify themselves when they speak, and with many sites, it may be necessary to identify the site. For example, "This is Bruce Rosenbloom at Adelphi University and I wanted to comment on..." goes a long way to helping other sites follow the discussion. It is also useful to speak slowly and clearly so that even with an occasional audio distortion, you will be understood.

Concerning the issue of how loudly to speak, if you have any doubt, you might ask for feedback from the other sites or moderator, e.g. "Am I speaking too softly?" or "Can you hear me at this voice level?"

Limit to 3-4 Points—If the videoconference will be instructional in nature, plan on 3-4 main points for a one- hour session. Although you may have several sub-points, by limiting the number of major points, you allow for a focused approach that may have greater impact than a longer list. Summarize these points at the end of the session.

Plan next class—One of the last matters of business is to discuss follow-up actions for students to take once the videoconference ends. You may suggest an asynchronous online discussion or assign a project to be reported on in the next session.