Lecturer's Guide to Teaching through Videoconferencing

UNBC UNIVERSITY OF
NORTHERN BRITISH COLUMBIA

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University
of Victoria

Introduction to this Guide

This guide is designed for lecturers teaching with videoconferencing technology. Its purpose is to familiarize lecturers with basic recommendations for effectively delivering a videoconferenced lecture or session as well as suggestions for instructional strategies for engaging students.

Videoconferencing is effective in delivering education to students in distributed locations. It allows two or more locations to interact in a two-way transmission of audio and video as well as other content through media such as DVD, PowerPoint or the Internet. Participants can hear and see each other, and can also see instructional materials that are displayed by the lecturer.

Videoconferencing at the Faculty of Medicine

The Faculty of Medicine Undergraduate Program delivers its lectures and sessions by using videoconferencing in dozens of locations, including three university sites (University of British Columbia, University of Victoria and the University of Northern British Columbia), as well as six provincial Health Authorities. The goal of the program is to increase the number of physicians in British Columbia; however, each lecture poses a unique challenge of engaging students who are not physically in the same lecture theatre or lab. The above image shows what students will see on the screen if they are in a different lecture theatre than the instructor; the instructor will appear in the large screen, while the other participating sites will appear in smaller screens. The distributed teaching environment is different than the traditional lecture theatre or classroom and requires different approaches to teach effectively.

Videoconferencing Presentations and Handouts

The most common way of presenting materials in the lecture is through a PowerPoint presentation. While effective PowerPoint presentations are important in all teaching settings, following these basic PowerPoint practices can increase student engagement during videoconferenced lectures.

As part of your lecture preparation you have the opportunity to provide your students with handouts or with your PowerPoint presentation before the lecture. Keeping this in mind, your PowerPoint presentation should provide key points or key diagrams only, while your handouts can   contain the remainder of your lecture content such as details, scenario or case descriptions, and can be put into handouts.

Successful lecturers let students know which parts of their presentation are not covered as part of the handouts:

> *"Please look up at the slides now, as I will be walking you through this diagram."*

> *"This part will not be in your handouts and I will need your attention up here."*

Be mindful of PowerPoint presentation best practices.

- ❖ Diagrams, charts and images – these should be clearly visible from a distance.
    - o A good practice is to check your presentation while standing three meters away from the screen– can you still see all the image details?
    - o It is best to choose a clear and simple diagram that you can fill in with more detail during the lecture by using the PowerPoint colour marker tool: when you are in the middle of your PowerPoint slide show, right click your mouse, choose pointer options, and select a colour to draw with.
- ❖ No animations or slide transitions – these may cause a short delay during the videoconference transmission and cause your voice to be misaligned with the points on the slides.

❖ Font larger than size 30
❖ List maximum 5 points per slide
❖ List only the key points and key diagrams
  Slides should introduce topics and summarize key points or act as visual aids to your lecture – complex details can be distributed as handouts or elaborated on. Don't read word-for-word from the slides, as this disengages students and causes them to become passive listeners.

Other audio visual equipment can greatly enhance a lecture. In a setting where students are in distributed locations, changing the lecture pace and format will stimulate student engagement with the information and contextualize it. The lecture theatres are equipped with DVD /CD players, an internet connection, and a document camera (a three dimensional overhead projector that allows you to draw/write or to show 3-D objects).

Dress appropriately and Arrive Early

Mid-tone solid colours are preferable, particularly if you are standing against a blackboard or whiteboard background. Black, white or brightly patterned clothing will make it to difficult to see you. Arriving even 10 minutes early to prepare your presentation and attach the microphone will make you more comfortable with the videoconference environment and ready to teach!

Videoconferenced Lecture Student Engagement Strategies

Videoconferenced lectures are the form of distance education that is most similar to traditional lectures. Engaging students in any learning environment is important but it is critical in videoconferenced lectures.

The Challenge

Lecturers can see students from distributed locations on monitors in front of the lectern (also called confidence monitors). However, as it is difficult to see detail, lecturers who cannot see distributed students' facial expressions will often struggle to gage the interest level of the class or to notice students who are asking questions. Likewise students who are in the lecture theatre where no lecturer is present can often feel like they do not have the same level of engagement with the lecturer as students who are physically in the same room. This requires a different teaching approach; recognizing that the student audience consists of students who are both physically in the same room and geographically dispersed is the first step to actively engaging students at all sites.

What are some basic things I can do to engage students at remote locations during lectures?

❖ Acknowledge students at all locations.
Addressing students at other locations, particularly at the beginning of the lecture, creates an atmosphere in which they are more likely to participate by asking questions. Year 1 and 2 lectures in the Faculty of Medicine Undergraduate Program are typically distributed between University of British Columbia, University of Northern British Columbia and University of Victoria.

"Good Afternoon. Students at UNBC and UVic, can you hear me well? If so please wave. I will be turning to you to ask you questions throughout the lecture."

❖ Let students know how you wish to handle questions.
Often breaking up the lecture halfway to ask for questions is an effective strategy. Some lecturers break up the lecture after each topic to ask questions – this will allow students from remote locations to ask questions early, before students in the local lecture theatre take your attention at the end of the lecture

❖ Encourage students to use microphones and repeat student questions to ensure everyone heard the question.

❖ Look at the confidence screen when asking students questions. The confidence screen is right in front of your lectern and allows you to see students at other locations. It is daunting for students to ask questions in a regular lecture for fear of asking a 'stupid question.' This anxiety can increase even more if a student has to catch the lecturer's attention through the screen. After asking students a question during the lecture, an effective strategy to break this barrier is to look at the confidence monitors to see if students at remote locations are waiting to speak.

Students at remote locations speak by activating a push-to-talk microphone which causes the camera to zoom in on their face or by speaking into one of the stand-up microphones in the lecture theatre.

What are some additional engagement strategies?

One of the most important strategies that can be implemented to engage students during videoconferencing is to focus on education techniques. Recognizing that students are not used to actively engaging with a movie theatre size screen, emphasizing engagement teaching techniques becomes vital.

An effective strategy that captures students' interest at the beginning of the lecture is an opener activity.

- Opener Activities

    3-2-1
    At the beginning of the lecture, asks students to make notes throughout the lecture of 3 things they have learned, 2 things they want to know more about and 1 thing they think they have mastered thanks to this lecture – let students know that you will ask one or two of them to read their list at the end of the class.

    Model
    Bring a model or object to class (the document camera in the lecture theatre allows objects to be seen in 3-D at all videoconferenced locations) and pose a question with regards to the object to which an answer will become more apparent throughout the class. Ask students to turn to the person next to them to discuss for 2 minutes. Begin lecture after 2 minutes and return to the question at the end.

    David Ausubel's Thought Organizers
    Present students with a blank chart or diagram in which they are to understand the upcoming material – students will prepare a mental map which will help them contextualize the information.

    Types of diagrams
    -cause and effect
    -timeline
    -venn diagram
    -mind map – thought bubbles
    -classification tree
    -comparison chart (T-chart)

- Change the lecture format and pace. Take brief breaks by asking questions, showing a short video clip, bringing in a model, or using the document camera to draw a diagram.

- Provide students alternative ways to contact you for more information.

- Relevance and challenge – match the objectives, determine what can be reasonably discussed during a 50minute lecture and refer students back to a handout.

Education Technologies which can assist in student engagement

Student engagement in videoconferenced lectures and sessions can be increased by providing alternative engagement methods though other educational technologies. The EdTech unit in the Faculty of Medicine provides guidance, consultations, and support for those lecturers who wish to use these technologies:

Audience Response System

Audience Response System is based on posing questions during lecture and having students 'vote' on the answers provided by using a remote clicking device that each student holds in their hand. The tool becomes an effective discussion stimulator when the lecturer asks students a question which is followed by a brief period for students to think about or discuss the question in groups. After students indicate what they think is the correct answer by using their clickers, the class can debrief about the reasons why particular answers were chosen.

Audience response systems are good tools to gage student level of knowledge of a particular topic and to find the areas or reasons why students are struggling. Audience Response Systems are particularly effective for videoconferencing as they provide the lecturer with feedback from students at distributed locations and engage these students with other students in the local lecture theatre.

Setting up a Wiki for the duration of the Block

Providing students with a space online where they can discuss the block materials amongst themselves increases their willingness to ask questions amongst themselves that they may not ask in the lecture theatre. A wiki is a collaborative website which can be entirely student led, or in which you can play a moderator role by guiding the discussion or leading students to appropriate resources. Whichever role you wish to assume as a lecturer, introducing a wiki into your Block can be a constructive tool to help students see their learning experience as a collaboration as opposed to a competition. The EdTech unit can assist in setting up a wiki and helping to determine what types of discussion categories will work best in the wiki for your block.

Interactive Online Modules

Online modules are interactive cases or tutorials where students learn through engagement in an online activity that is designed to address teaching and curriculum objectives. These types of modules can provide supplemental methods of learning to didactic lectures and can range from mini-cases in which a student advances through a problem-based case to decision mazes. These

modules can be designed to allow students to receive feedback on the decisions they make in the case as they advance through the interactive tutorial.

Contact Information

This guide has been prepared by the EdTech unit the Faculty of Medicine. EdTech can provide videoconference training and works with lecturers to determine if other technology can act as an enabler in your lecture or course. Focusing primarily on education practices, EdTech provides:

- ❖ training for EdTech tools
- ❖ teaching-technology needs matching
- ❖ media assistance for lecture preparation

To find out more about education technology please contact:
EdTech at **604.827.5841** or **edtech.med@ubc.ca**