Enhancing Lecture Presentations

Teaching Goal:

To enhance classroom lectures so they present content more effectively and engage students in learning course content.

Benefits of Addressing — Research and Theoretical Base

Research indicates that the use of technology to enhance lectures has several benefits.

Students report that incorporating technology into lectures makes lectures more interesting, helps them pay attention, and helps them understand the material (Sammons, 1997; Fox, 1992).

Technology can be used to present content in a variety of formats, appealing to students with different learning styles and engaging them in the learning process (Pence, n.d.).

Technology allows instructors to exercise creativity and freedom in lecture presentation (McKinney, 1996).

Technology, particularly PowerPoint, can add clarity to the content and structure of a lecture (Nicholson, 2002).

Method 1. Creating PowerPoint presentations that use text, graphics, images, and/or media to convey content.

Techniques Rationale/Example

Use text to summarize key points covered in your lecture.

Text can be used to draw attention to key phrases that relate to the content you are covering in your lecture. It helps students focus on what is important and assists with their note taking. However, be careful not to misuse text on PowerPoint slides. See the Best Practices for Slide Design document for tips on using text in PowerPoint.

Use graphics and images to visually represent content.

Some content naturally lends itself to visual representation, such as diagrams and charts, which put the content into context better than text. You may also have photographic images that visually depict a concept you are discussing in your lecture. Incorporating graphics and
images helps you present some content more effectively. Also, many students learn better by seeing a visual representation than by reading words or listening to your explanation.

See the Inserting Graphics and Images into PowerPoint document for steps on how to add images and text to your presentation.

Use the Sympodium to mark up your presentation. Sympodium interactive pen displays allow you to create notes and mark up content displayed on an overhead projector. You can also capture screenshots of your markups to refer to at a later time or to post for your students in myWPI. Sympodiiums are available in SL 104, SL 105, SL 115, AK 116, AK 219, AK 232, AK 233, SH 106, and the TV studio in Fuller Laboratories. Link audio or video files to your presentation.

Audio and video files can be linked to your PowerPoint presentation and played as part of your presentation. Audio and video can be used to illustrate points in your lecture that are difficult to explain with text and graphics or images. It also gets students' attention and keeps them engaged.

See the Inserting Audio and Video Clips into PowerPoint document for steps on how to add images and text to your presentation.

Method 2. Incorporating Web sites into lectures.

Techniques

Rationale/Example

Using Internet Explorer, bookmark Web sites with relevant content and display them during your lecture.

Locate Web sites that contain content that is relevant to the topic you are discussing in class. Bookmark those sites and use a projected computer during class to visit them and view the content available on them.

Provide hyperlinked URLs in your PowerPoint presentations.

If you type a URL on a slide in PowerPoint, it will automatically be hyperlinked. This means that when you click on the URL during your presentation, it will launch an Internet Explorer window and display the Web site at that URL.
Displaying the URL in your PowerPoint presentation gives students a chance to write it down so they can visit the Web site later on their own.

Method 3. Displaying videos containing relevant content.
Techniques Rationale/Example
Display video tapes or DVDs in your class.

If you are teaching in an electronic classroom, use the built-in DVD or VHS player to display a video to your class. If you are not teaching in an electronic classroom, contact the ATC to find out what equipment can be made available in your classroom.
Create your own video files to be viewed during your class.

Camtasia Studio is a software application that allows you to capture what is displayed on your computer screen and narrate it. You can use Camtasia Studio to make video-based demonstrations or tutorials of software applications. It is easy to use on your own. The software is available from the ATC. Send e-mail to atc-ttc@wpi.edu to inquire about getting Camtasia Studio on your PC.

The ATC also does video production for WPI faculty. You can schedule time to work with ATC staff in the TV studio or make arrangements for ATC staff to accompany you on location with video equipment. This is a good way to give students a look at real world facilities or record experts they would not normally be able to hear from.

Note: Video production can take a lot of planning and resources, especially during post-production. The ATC tries to accommodate all requests, but due to the effort involved, it may not be able to accommodate all requests. Contact the ATC for a consultation to determine the scope of your request.

Techniques Rationale/Example
Play audio CDs during your lecture.

If you are teaching in an electronic classroom, use the CD-ROM drive in the room's computer to play the CD files. If you are not teaching in an electronic classroom, contact the ATC to find out what equipment
can be made available in your classroom.
Using Internet Explorer, bookmark Web sites with relevant audio and display them during your lecture.

Locate Web sites that contain sounds or links to sounds that are relevant to the topic you are discussing in class. Bookmark those sites and use a computer during class to visit those Web sites and play the audio.
Record your own audio files and play them during your lecture.

Record an event that students normally wouldn't have access to, such as a speech, or record an expert on the topic you are discussing in class as a way to give students access to experts who are not available to come to your class as a guest speaker.

Digital Audio Recorders and iPods are available from the ATC's equipment inventory. They allow you to easily record your voice or a group discussion.

Audio recording software is also available to use on your own PC with a microphone. Most PCs come with basic sound recording software (go to Start > All Programs > Accessories > Entertainment on most computers). Other software, such as Nero Wave Editor, is available in the Movie Lab or on any computer with the Nero 6 CD burning suite.

Method 5. Using multimedia, animations, or simulations during lectures.
Techniques Rationale/Example
Locate multimedia presentations, such as animations and simulations, that are available via Internet resources.

MERLOT (Multimedia Educational Resource for Learning and Online Teaching) is an online educational portal that contains links to online learning materials created by college faculty in all subject areas. Materials are peer reviewed and descriptions include details about the benefits of using the resource in the classroom. You can link to these resources and display them during class or link to them from a myWPI course site.
Animate graphics in a PowerPoint presentation.
PowerPoint gives you the option of animating graphical elements on a slide. This is particularly helpful when you have a diagram with multiple complex components. Sequencing and timing graphical elements via animation helps a diagram be digested by students in manageable segments, enhancing their understanding of the content.

See the Animation and Slide Transitions in PowerPoint document for steps on how to add images and text to your presentation.

Work with ATC staff to create multimedia, animations, or simulations that you design.

If you can't find existing content that is appropriate for your course, consider creating your own with assistance from the ATC. Keep in mind that creating this type of content can require a lot of planning and resources. The ATC tries to accommodate requests, but may be limited due to the effort involved. Contact the ATC for a consultation to discuss options.

Related Resources

- PowerPoint How-to Topics
- MERLOT (Multimedia Educational Resource for Learning and Online Teaching)
- Electronic Classrooms
- WPI's TV Studio

References


Maintained by itweb@wpi.edu
Last modified: May 07, 2008, 14:02 EDT
[WPI] [ATC] [Home] [Back] [Top]

Academic Technology Center - Worcester Polytechnic Institute
100 Institute Road, Worcester, MA 01609-2280
Phone: +1-508-831-5220 - Fax: +1-508-831-5881 - atc-ttc@wpi.edu