Images, Sounds & Video
Adding Multimedia to PowerPoint

Be Free To Teach

Incorporating Multimedia into Your Teaching

One of the most important uses of technology is that it makes it easy for instructors to incorporate multimedia into their teaching. While we use all of our senses to take in information, we each seem to have preferences in how we learn best. In order to help all students learn, we need to teach to as many of these preferences as possible.

There are a number of different models of learning styles. One of the most popular identifies visual, auditory, and kinesthetic as the three ways in which people take in information. We know from experience that students respond well to the use of images to stimulate their interest in a subject. For about 65% of the population, this is their preferred style. Photographs, maps, paintings, graphs/charts, drawings are just a few of the types of visuals that can be used to engage students who are more visual learners. About 30% of the population prefers to receive information in an auditory manner. Some ways that you can incorporate sounds into your class include readings (poets reading their own works, you reading important passages from a book, etc.), music, specific sounds (bird calls, ocean waves, etc.), and language tapes in foreign language classes. Finally the 5% of the population that prefers a kinesthetic approach would enjoy "doing" things as a way to learn information. This could include participating in labs, demonstrations, and various kinds of simulations. (See the websites listed at the end of this handout for more suggestions.)

When we think about a typical university course, it is rare to find all three of these approaches to learning incorporated into a class. While it may seem impossible to do this, it can be done through thoughtful planning and preparation. It does force us to conceptualize the class differently—with a focus on the variety of ways in which students learn. See the example below.

Date	Class Topic	Visual	Auditory	Kinesthetic
10/04/05	Declaration of Independence	Project paintings of major characters; maps; pictures of actual documents; diagrams of how related documents impacted Jefferson. Visual deconstruction of the document text—how were different groups of people depicted and impacted.	Reading aloud of the Declaration; reading aloud of different opinions of the Declaration; reading aloud of related documents.	Role play a debate between persons from that era—some who are for the Declaration and some who are against it.

Sound and Video Files

Sound and video can play a powerful part in the learning experience. The key word is part. Do not let media overwhelm the rest of the experience. Here are some ideas to keep in mind:

- These files can take up a lot of storage space. The higher the quality the more space it will take to store the file. Larger files take longer to load and download.

- By default, PowerPoint automatically links to these files rather than embedding them in the presentation. When your presentation has linked files, you must copy the linked files as well as the presentation if you are going to be giving the presentation on another computer. In addition, the files must be at the same level as they were on the original computer. This means if, on your computer, a folder is entitled "lecture one" and in it are your PowerPoint file and all the media files associated with it, then you'll need to copy the entire folder to the new computer and leave the media files where they were relative to the presentation.

- Different file types allow different options for playback, quality, size and compatibility. Adding these files to your PowerPoint presentation is the easy part. You'll want to learn a little something about sound and video files before you dive in. The CET (http://libweb.uoregon.edu/cet/) is a great place to start.

- Consider your presentation environment when planning to incorporate sound and video into your presentation. While your laptop speakers may pump out some volume, it's unlikely that they will be sufficient for students in the back of the classroom.
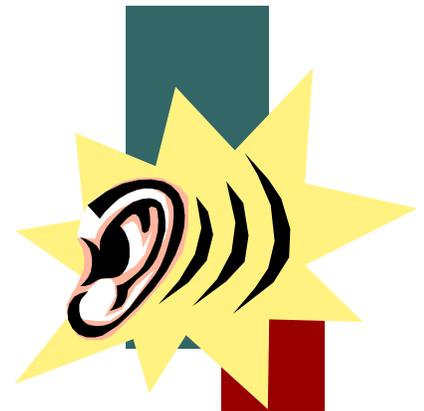
Sound Files and PowerPoint

When you insert music or sounds onto a slide a sound icon appears to represent the sound file. You can set the sound to start automatically when the slide displays, start on a mouse-click, start automatically but with a time delay, or play as part of an animation sequence. If you don't want the icon to be visible, you can drag it off the slide.

With PowerPoint you can add music and sounds from files on your computer, the Internet, or the Microsoft Clip Organizer. You can also record your own sounds to add to a presentation, or use music from a CD. The following instructions are to add an existing sound file to a slide. If you want to learn more about the other sound options, you can always set up an appointment at the CET (http://libweb.uoregon.edu/cet/).

The **Sound from File** option allows you to add your own sound files. These can be ones you've digitized yourself, purchased from various venues, or downloaded from the web under the fair use guidelines for educational use of copyrighted material. To add a sound file:

1. Be sure you are on the slide to which you want to add the sound file.

2. Pull down the **Insert** menu and hold on **Movies and Sounds**.

3. Select **Sound from File** from the submenu that appears.

4. Locate the **sound file** on your computer and click the **OK** button.

5. Some versions of PowerPoint will ask you if you want to play the sound **automatically** when the slide appears. If so, select **Yes**. Selecting **No** means you will need to **click the sound icon** or set up an **animation sequence** and include the sound file as part of it, in order to play the sound. (See the **Animation** handout for more information.)

6. A **sound icon** should appear on your slide. **Double click** on it to test the file.

Video Files and PowerPoint

Movies are desktop video files with formats such as AVI, QuickTime, and MPEG, and file extensions such as .avi, .mov, .qt, .mpg, and .mpeg.

You can add movies to slides from files on your computer, the Microsoft Clip Organizer, or the Internet. If you want to learn more about the video, you can set up an appointment at the CET (http://libweb.uoregon.edu/cet/).

1. Be sure you are on the slide to which you want to add the movie file.

2. Pull down the **Insert** menu and hold on **Movies and Sounds**.

3. Select **Movie from File** from the submenu that appears.

4. Locate the **movie file** on your computer and click the **Ok** button.

5. Some versions of PowerPoint will ask you if you want to play the movie **automatically** when the slide appears. If so, select **Yes**. Selecting **No** means you will need to **click the movie** or set up an **animation sequence** and include the movie file as part of it, in order to play the sound. (See the **Animation** handout for more information.)

6. The **movie** should appear on your slide. **Double click** the movie to test the file.

Image Files and PowerPoint

PowerPoint handles many popular graphic file formats into your presentation. You don't need a separate filter to insert the following file formats:

- Enhanced Metafile (.emf)
- Graphics Interchange Format (.gif)
- Joint Photographic Experts Group (.jpg)
- Portable Network Graphics (.png)
- Microsoft Windows Bitmap (.bmp, .rle, .dib)
- Windows Metafile (.wmf) graphics
- Tagged Image File Format (.TIFF)

"Prejudices, it is well known, are most difficult to eradicate from the heart whose soil has never been loosened or fertilized by education; they grow there, firm as weeds among rocks.
-Charlotte Bronte

For more information on some of these image types, see the *Understanding Digital Images* handout. When possible, it is recommended that you use a jpeg (.jpg) image for a smaller PowerPoint file.

To insert a picture from an image file:

1. Be sure you are on the slide to which you want to add the image file.
2. **Click** where you want to insert the picture.
3. Pull down the **Insert** menu and hold on **Picture**.
4. Choose **From File** from the submenu that appears.
5. Locate the picture file on your computer and click **Insert**.

To insert a picture from Microsoft Clip Art:

1. Be sure you are on the slide to which you want to add the image file.
2. **Click** where you want to insert the picture.
3. Pull down the **Insert** menu and hold on **Picture**.
4. Choose **Clip Art** from the submenu that appears.
5. Choose the clip art image you want to use and click **Insert**.

To resize an image in PowerPoint:
Resizing an image in PowerPoint changes the physical width and height of the image but does not change the file size. Whenever possible, use a graphics program like Photoshop to size the image. For more information on file size, refer to your **Understanding Digital Images** handout.

1. **Click once** on the image you want to resize to select it.
2. Click and hold on a **sizing handle**, (the square handles that appears at each corner and along the sides of the rectangle that surround a selected object,) and **drag** until the object is the shape and size you want.

   - To resize an object **proportionally from a corner**, hold down the **shift key** and drag a **corner-sizing handle**.

   - To resize an object **vertically, horizontally, or diagonally from the center outward**, hold down the **Option** key (Macintosh) or **Control** key (Windows) and drag a **sizing handle**.

   - To resize an object **proportionally from the center outward** hold down the **option** and **shift keys** and drag a **corner-sizing handle**.

Inclusive Classroom Considerations

When working with multimedia it is important to take several things into consideration. While no one would consciously teach in a manner that would exclude students, sometimes we do things unconsciously that make certain students or groups of students feel uncomfortable or not involved in the class. You know what you are trying to accomplish by using a particular image, sound file or movie clip, but the students will not. They will make assumptions and draw conclusions based on the material you use. Multimedia is powerful and we need to use it thoughtfully.

Here are some questions to ask when selecting media for use. When you take the time to consider these things and ask your students to do the same, you are modeling a powerful lesson for them.

||||| Who is included? Who is not included?

||||| How are those who are included represented? Positively or negatively?

||||| Do they reinforce stereotypes in any way? (If they do, or might to some students, don't use them.)

||||| What assumptions might students make from the media files you use?

For web resources regarding inclusive use of media, especially images, see *Understanding Digital Images* included in your red folder.

Copyright and Fair Use

Educational use of copyrighted material can sometimes be justified through the "fair use" clause in federal copyright law. The goal of this section is to briefly define the elements of "fair use" and to lead you to more substantial sources for information about how copyright law applies to teaching with the Internet.

Factors of Fair Use

If you use a piece of copyrighted material in your teaching, four factors will determine whether or not your use of that material qualifies as "fair use." Note that **ALL FOUR** of these factors must be evaluated for fair use to apply.

1. **What is the nature of the use?** Is the reproduction or the distribution for education or for commercial gain?

2. **What is the nature of the copyrighted work?** Fiction, high-level analysis, works of art, and musical composition are considered the most creative and therefore receive the most protection from infringement. Compilations and derivative works are usually not protected by copyright at all (except possibly in their format or user interface).

3. **What is the quantity of the work used?** If you use 3% of the total substance of the work or less, you are probably safely within fair use. If you use more than 10%, you are in uncertain territory.

4. **What is the potential impact on the copyright holder's market?** If your use of some material could materially reduce the creator's ability to profit from it, this factor would point toward your use not being "fair".

The fact that a work is unpublished shall not itself bar a finding of fair use if such finding is made upon consideration of all the above factors. NCSU's Copyright Tutorial (http://www.lib.ncsu.edu/scc/tutorial/index.html) provides more information on each of the four Fair Use criteria.

"In the end antiblack, antifemale, and all forms of discrimination are equivalent to the same thing- antihumanism."
-Shirley Chisholm

Additional sources of information are:

|||||| **UO Policies on Intellectual Property** (http://techtran.uoregon.edu/content/uo-policies-intellectual-property)

|||||| **The Educational Multimedia Guidelines**
(http://www.uspto.gov/web/offices/dcom/olia/confu/appendix.htm#j)

|||||| **Stanford University Copyright and Fair Use**
(http://fairuse.stanford.edu/)

Multimedia Resources

Using Technology in Teaching and Learning

|||||| **Use of Technology in Teaching and Learning**
Instructional Technology Group, Yale University
http://itg.yale.edu/
Great first site to visit. Includes examples of using images, audio, video, simulations, and course materials and study aids. (However, many of the links are open only to students at Yale University. The ones below are among those accessible to "outsiders".)

|||||| **Intermediate Chinese** (Chns 130, Prof. Ling Mu, Spring, 2005)
http://classes.yale.edu/chns130
Includes listening exercises. Provides many ways for students to learn. There are Chinese characters, videos of student skits, and photos of signs in Chinese. Check out the *Media Resources* links.

|||||| **Intermediate Japanese** (Japn 14k0, Prof. Maruyama, Fall 2004)
https://classes.yale.edu/japn140/home.html
Sound and graphics enhance the teaching of Japanese.

|||||| **Fractals** (Math 190, Prof. Frame)
http://classes.yale.edu/fractals/
Explores fractals in a variety of ways including Surrogates of the Stock Market that illustrates how the cartoon method can generate convincing surrogates of the stock market. Students can experiment with an online Chaos Game. Explores fractals in mathematics, in living systems, in art and architecture, in poetry and in physical systems. In the Optical Gasket Lab silvered plastic Christmas tree ornaments are used to construct optical versions of the Sierpinski gasket.

Learning Styles and Multimedia

|||||| **Addressing Diverse Learning Styles Through the Use of Multimedia**
by Susan M. Montgomery, ASEE/IEEE Frontiers in Education '95 Session 3a2 - MULTIMEDIA 1.
http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=483093&abstractAccess=no&userType=inst
Good background reading on what instructors can do to enhance student learning.

"The biggest and most long lasting reform of undergraduate education will come when individual faculty or small groups of instructors adopt the view of themselves as reformers within their immediate sphere of influence, the classes they teach every day."
-K. Patricia Cross

Learning Styles
http://www.ncsu.edu/felder-public/Learning_Styles.html
Links to a number of oft-cited articles by Richard M. Felder. Good reading on learning styles, especially as they relate to teaching science and engineering courses.

Public Domain – A Place to Start

Public Domain / Copyright Free Media
http://eduscapes.com/tap/topic98.htm
This page provides links to some of the better copyright-free and public domain resources. Links are intended for educators and librarians who wish to locate quality, copyright-friendly materials for educational, noncommercial, and nonprofit projects.

TheFreeSite.com
http://www.thefreesite.com/Free_Sounds/Free_WAVs/
This site provides a collection of links to sound files available for free on several other sites. WAV categories available here include cinema, TV, sound effects, computer system events, politics, humor, and more.

Pics4Learning
http://pics.tech4learning.com/
Pics4Learning offers copyright-free images for education.

Creative Commons
http://creativecommons.org/
Creative Commons offers various audio and movie resources under different CC license agreements.