Presentations and lectures

Producing computer-based presentations for the lecture theatre or the Web

Introduction

The past ten years has seen a shift away from the 'transmission' model of lecture-based courses to one where students take greater responsibility for their learning. Best practice recognises that conventional lectures are relatively ineffective in terms of providing an opportunity for learning. However, lectures do have a role in motivating students and maintaining a sense of common purpose. Accordingly lecturers are increasingly deploying student-centred activities in lectures that encourage the students to reflect on the lecture content and provide the opportunity to refresh their concentration. What role do computers have to play in such developments?

Computers can and should be used to provide multimedia illustrations of concepts introduced during the lecture, including images, diagrams, animations, video and sound. While all these media can be delivered individually without a computer, current presentation software also allows them to be integrated into a single presentation.

Choosing your presentation software

Which presentation program you choose will depend on what platform you use and what software and facilities are available to you in your institution. The most popular program for creating and delivering presentations is **Microsoft PowerPoint**, but there are other programs such as **Corel Presentations**. You could also consider using these programs to author materials for the Web, or create Web-based lecture notes using Web editors or Adobe Acrobat programs, both of which allow delivery on a Web browser. Lecturers seem to prefer presentation tools for live presentations and production of related handouts. They use the Web as a resource archive for permanently available information.

Planning your presentation

Whether you are producing a new lecture or revising an old one, you need to decide on the structure and content of the lecture in the usual way before locating your resources.

General aspect: Make sure that the overall design does not interfere with the main message.

Text: When designing your presentation don't include too much text: remember it is difficult to read from a screen. Include only the essential points, and avoid using fancy text animations. If you want to introduce detailed examples which will be too text intensive on the screen, consider producing a hand-out (many presentation tools have a notes area for this purpose).

Images: Text book diagrams and images can easily be digitised using a good flat-bed scanner and a graphics program such as **Adobe PhotoShop**. Images from programs can be captured from the computer screen using **Paint Shop Pro**, or **LViewPro**. If you want to produce your own diagrams most presentation programs include relatively advanced drawing facilities. Most presentation tools include a large gallery of clip art that you can add to presentations and customise as you wish.

Animations: Animations are extremely effective at demonstrating dynamic processes occurring in time and space that are impossible to illustrate in text books. Many textbooks now include CD-ROMs which may contain animation sequences that can be effectively incorporated into presentations. If you would like to create your own animations, the easiest way is by producing an animated GIF which can be displayed via a Web browser. Essentially this means creating a number of successive images and then using a program like **GIFCon** or **MS GIF Animator** to run these images together, giving the impression of continuous movement. For more complex animations in which individual objects are moved independently of each other consider using **Astound's WebMotion**. As for graphs and charts,

MS PowerPoint and others include facilities for creating or importing them. Simple animations can also be created in *Java*.

Video: Although it is possible to digitise video for incorporation into your presentation, it may be easier to switch to using analogue video (i.e. from a videocassette), as the high specification data projectors which are increasingly common in lecture theatres can also deliver video. Again, consider using existing resources from CD-ROM for digitised video material. If you want to digitise your own material, ask your media services department what facilities they provide. A significant problem in using digitised images can be the size of the files so consider how you will store and transfer these before you begin.

Sound: PowerPoint has an extensive library of recorded sound which you can use to enhance your presentation. You can also record a narration or comments on your presentation using PowerPoint and a microphone. If you want to create more sophisticated sound files there are good shareware editors available, e.g. *Cool Edit*.

Delivery in the Lecture Theatre

Having created your presentation, there remains the issue of delivering it in the lecture theatre. Increasingly, universities and departments have dedicated presentation computers, linked to data projectors within lecture theatres, for the delivery of computer-based presentations. High specification data projectors can also be used to project analogue video. If you decide to use a Web browser as your presentation medium, you will need to determine whether Web access is available. If you do not have Web access it may be worth considering use of a program such as *Lotus Screen Cam* or *Real Player* that allow movie sequences to be generated from screen output (for example while browsing through a Web site) and played back off-line. Alternatively, Web retrieval programs such as *Web Buddy* and *Web Whacker* program allow you to download entire Web sites onto your computer for demonstration purposes. Remember that including animations that you use in your lectures on your Web site will increase the learning opportunities for your students. Find out what facilities are available to you in the rooms you routinely use *before* you begin to produce your computer-based presentation. If dedicated machines are not available it may be possible to hire out portable laptops and data projectors, or an LCD palette may be available to convert a normal overhead projector into a data projector.

Lighting in the presentation room is another issue to consider since only high-end data projectors are likely to function well under the kind of ambient lighting conditions suitable for note-taking. Also, security may be an issue for portable equipment.

Delivery on the Web

Increasingly the Web is being used to deliver lecture material, either directly on distance and open learning courses, or as follow-up support of live lectures. Design and navigation of the Web pages you create is crucial if you want students to use the site to its maximum. Many presentation software packages allow easy conversion of your presentation into HTML. Alternatively you can use document transfer formats outputted from programs such as *Adobe Acrobat* or *MS Word* for publication on the Web. If you are using a recent version of *Netscape Navigator* you will also be able to make use of plug-ins for delivery of additional content. Always remember to check that your students can view your pages from the machines they use and the site is displayed as you intended it to be.

Using other programs

While the focus of this primer is on multimedia resources, lectures may also be an ideal setting for the use of other PC-based software. For example, simulation software such as *STELLA* might be used with a class to develop and explore a model, or to illustrate the fundamental concepts of the lecture. Presentation software such as *MS PowerPoint 97* allows integration of shortcuts to other Windows programs, making the transition between programs as seamless as possible.

Resources

The Application of Presentation Technologies in Higher Education project (**APT**): http://www.umist.ac.uk/apt/

Microsoft PowerPoint: http://www.microsoft.com/products/

Corel Presentations: http://www.corel.com

Adobe Photoshop and **Adobe Acrobat**: http://www.adobe.com/prodindex/main.html

LView Pro: http://www.lview2.com

Java: some source code for producing animations is freely available at: http://www.developer.com

Paint Shop Pro: http://www.jasc.com/psp.html

MS GIF Animator: http://www.microsoft.com/imagecomposer/gifanimator/gifanin.htm

Lotus Screen Cam: http://www.lotus.com

Real Player: http://www.realplay.com

WebMotion: http://www.astoundinc.com/products2/webmotion/webmotion.html

Web Whacker: http://www.bluesquirrel.com/products.html

STELLA: http://www.hps-inc.com/

Related Primers

Multimedia: graphics

Multimedia: animation

Multimedia: sound

Finding appropriate CAL materials

Searching on the Web

Original Authors
Christina Smart
Peter Miller
Manuella Essaka and Clive Young (APT project)
David Wonnacott

Some further considerations

The design of your presentation is very much a matter of personal preference, however, there are some design issues which you should bear in mind.

Design issues
The audience view

- remember that what you see on your computer screen does not always match what your audience will see when your presentation is relayed through a projection system.

- always try out your presentation well   in advance to allow time for changes. Sometimes the fonts you have used do not match those installed on the computer set up for the presentation.

Use of colour and styles

- some colour combinations work much better than others when projected

- remember to consider those with colour vision defects. Avoid red and green combinations. Red on blue is also difficult for some people.

- beware of using too many colours and styles - this can make your presentation look messy

Presentation issues

- keep the number of points on any one slide to a minimum - too much and your audience is reading and not listening to you

- too many 'gimmicks' can distract the audience - they start wondering how you did that!

- on the other hand too many slides the same can be boring - a little variety is a good thing

General issues

Documents previously prepared in Word can be copied into PowerPoint. Ensure that the Word document is in **outline view,** copy and paste it into PowerPoint also set to outline view.

Many text books come with a set of PowerPoint slides for lecturers' use. These can be used and altered tosave some valuable preparation time.

A computer based presentation is very useful when you want to show material from another piece of software e.g. showing a spreadsheet to highlight a point in a lecture. From your PowerPoint presentation you can switch to the spreadsheet (or other application) by using the ALT and Tab keys together. You can then discuss the spreadsheet, make your point and using ALT & Tab again switch back again into your presentation. Being able to show graphically the effect of changing variables in a spreadsheet model can illustrate your point more powerfully than can be done with words. Such techniques can enliven your lecture and aid conceptualisation for your students.

One of the problems with presenting from the computer using a projection system is that the lighting has to be dimmed for the audience to see the slides. The level of lighting available to you is often not under your control and you may find that the light level is such that your audience cannot see to take notes. In addition you may not be able to make eye contact with your audience which may affect the way you present and the way you are perceived. In some situations a set of OHP slides, which can be prepared in PowerPoint, may be a better option.

If you are planning a computer-based presentation don't forget to have a set of OHP slides available in case of power failure of other technical problems. Remember Murphy's Law!

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