



How should I use the chalkboard to help my students take notes?

Why use a transparency instead of PowerPoint?

Why should I go to the trouble of using media at all when I teach a discussion section?

Your use of instructional media and technology in teaching can have a profound impact on students' learning. When done well, using a variety of media can enliven a class, encourage student participation, and help students grasp difficult concepts. When used poorly, these same tools can obscure your instructional objectives and make students confused, anxious and frustrated.

Tips for using different types of media and technology are discussed below. However, before moving on to specific methods, several general principles related to your use of media and technology should be kept in mind:

- ▲ *Choose the media that best suits your instructional objectives. Decide what you want to accomplish and then employ the tools that are most likely to help you achieve results. Do not let the media that is available to you determine how or what you will teach.*
- ▲ *If possible, use a variety of tools. Using videos, computers, overheads and the chalkboard not only keeps students' interest but also responds to the needs of those who receive information in different ways.*
- ▲ *Check out your media or technology before class starts to be sure it is working properly. Nothing is more frustrating to you or the students than to find that the VCR does not work or the overhead projector is lacking a light bulb.*

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The Chalkboard

This mainstay must have something to offer teachers and students, for it has been around for quite some time. In fact, there are several good reasons for using a chalkboard:

- **Speed:** we write on the board at about the same speed with which we comprehend information, so using a chalkboard helps set an effective pace for learning.
- **Organization:** you can outline the day's agenda or summarize main points and refer back to these to integrate your ideas and give the class a sense of progress.
- **Visuals:** the board lends itself well to working on formulas, solving problems, drawing graphs, and diagramming sentences.
- **Interaction:** the board is also helpful in generating interaction with students, as you can use it to ask for ideas, make lists (and even laugh at your occasional spelling mistakes).

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Of course, using the chalkboard effectively takes practice – it is not necessarily as easy as your best teachers made it seem. Here are some tips on using the chalkboard effectively:

- Always face the classroom when you use the board – even when you write. Rather than turning your back to the class while you write, and talking to the board, you should learn the skill of standing to the side and writing.
- Write clearly and legibly. Use large letters and be sure those in the back can see. Give your students time to take notes. Pause periodically to let them reflect, to ask questions, or simply to copy down what you have done.
- Plan how you will use the board. Students use your work to take notes (if you do not believe this, ask to see one or two notebooks after a class), so poor organization hurts them. Will you put your agenda to one side and then build an outline on the rest of the chalkboard? Can you erase details while leaving the main points visible?
- Structure your work. You can use headings, colored chalk, circles, underlining and different styles of writing (block letters, all caps, etc.) to help students see different sections and concepts.
- If, in working through a problem on the board, you make an error, do not just erase it. Stop, alert your students that you have made an error, and ask them to find and fix it.
- If you use the board to list students' comments, do so verbatim; change a student's words only with his or her permission.

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The Overhead Projector and Transparencies

Overhead projectors enlarge the images placed on plastic transparencies and display them on a screen for a room of people to view. There are at least two main disadvantages of using overhead projectors: first, they can be noisy and hard to talk over; second, transparencies can make it difficult to refer to earlier points or to link ideas and concepts.

Still, there are several potential benefits:

- Creativity: you can use laser printers and copiers to produce transparencies, allowing you to directly copy graphs, charts, diagrams and even comics and bring them to class to illustrate important points and enliven discussion.
- Clarity: if you prepare your transparencies ahead of time, you can usually make them neater and more organized than if you were writing on a board.
- Location: when you write on transparencies, you do so facing the class, so you do not need to worry about turning your back to them.
- Efficiency: if you use a computer in your creation of transparencies, you can revise them for future use, easing the preparation for future classes on the same topic.

Here are some suggestions that will help you use transparencies effectively to promote student learning:

- Use "bullet points" rather than full paragraphs. You will avoid falling into the trap of reading to your audience (a frustrating practice since we can all read) and will be reminded of what points you would like to expand upon.



- Avoid putting too much information on any single transparency. Davis (1993) recommends that each transparency be used to illustrate a basic concept, and that if you have a more complicated concept you use multiple, simple transparencies.
- Avoid using too many transparencies. Davis (1993) recommends using no more than 10 or 12 transparencies for a one-hour class. Using more can overwhelm students with information and force you to rush through the material rather than develop concepts.
- Structure your transparencies as you would a chalkboard. Use headings, underlining, different typefaces, etc. If possible, employ color to help students see your outline.

Video Tapes and Film

Videos and films can show historical footage or re-created events, demonstrate processes or events that cannot easily be replicated in labs, or slow down and analyze motion. However, because students are often used to relaxing or “tuning out” when the TV comes on, it is important to do what you can to make sure that your use of videos facilitates student learning. Here are some tips:

- View the film ahead of time. You can then develop exercises and discussion questions based on the video, highlight key areas for the class, and know where to stop the video or fast-forward through it. Often you will only need a short segment tape to make your point or illustrate a concept.
- Prepare the class for the video. Let them know what they are about to see, how it connects to what they have been learning, and things to look for when viewing.
- Make the film important to students. Consider preparing a list of questions that let students know they will need to pay attention to the content of the video. You may want to stop the film at key points (though not too often) to focus students’ attention on particular issues or situations, and you may want to have a discussion about the video after it is over. Make sure students know that the material covered in the film will be on tests, or that they will need to address it in their papers.

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Slide Projectors

Though they are slowly being replaced by more advanced technology, slide projectors continue to be used in many disciplines and can be helpful in enhancing a presentation. If you decide to use a slide projector, be sure your slides are loaded properly and that the machine (including any remote control) is working properly before class begins. Also, if the slides you will use are not your own, allow time to borrow them from the library, the professor, or whatever source you will be using.

Computer Programs

Today’s computer programs offer many ways to support learning. Programs such as Microsoft’s PowerPoint provide an excellent way to prepare computerized slides much as you would prepare transparencies for an overhead projector. And many of today’s classrooms are equipped with computers to display these slides on large screens.



In addition, word processing programs like Microsoft Word have the capability to allow multiple people to collaborate on papers, track changes, and agree on revisions. You can allow students to write papers together, or have them e-mail you the document for you to revise and return.

The World Wide Web

The World Wide Web offers seemingly unlimited potential to encourage learning. However, unless you plan carefully how you will use the web in your teaching, you may find that your students do little more than surf through your class. Using e-mail can help you stay in touch with students and to get discussions going on class topics. You will need to decide whether student participation will be mandatory. Some instructors require that all students send a specific number of messages a week, and factor this into the participation grade. Other instructors use e-mail listservs, but do not require students to participate. The Web can be a valuable research tool, helping students access resources in other universities or nations, and letting them learn about other cultures. However, many students fall into the trap of using the Web as their only research tool. There are several things you can do to avoid this problem:

- Set clear expectations for your students. You can encourage students to access resources on the Web, but also make it clear that students must have citations from other, more traditional sources such as books and print journals.
- Point your students in the right direction. Try not simply to send students off to do research on the Web. Instead, show them in class what you consider to be quality material gleaned from the Web. You can also point them to selected Web sites as places to start, leading them in the direction of good information.

The Center for Scholarly Technology (CST) at USC supports a Web-based course management program called CourseInfo. This program allows you to put assignments on-line, administer tests on the Web, and channel all student communications to one account. Contact CST at (213) 740-7010 for more information.

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DH/March 2000