

Using Audio Visuals To Illustrate Concepts

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• How do you teach the MTV generation?

Lasso (2001) discovered that students who grow up watching Music Television (MTV) learn differently. He noted that his students appeared to relate better to a screen than to a blackboard.

This research is particularly relevant to my job. Firstly because I teach on a media technology course and have taught on a video games course and secondly as Lasso says I am teaching the MTV generation.

In this paper I am going to consider why we need to gain and keep students' attention. I am then going to explain some of the benefits of using sound and video to convey meaning, and how it enables you to explain concepts more clearly. I am finally going to look at incorporating audio visuals into teaching.

• Why we need to get and keep students attention.

From his research Lasso (2001) believed that there are four main features of effective teaching: clarity, organisation, stimulation of interest and student engagement, and classroom climate. It is primarily the area concerning stimulation of interest and student engagement which I wish to consider further here.

Lasso's ideas closely follow those of Gagné. Gagné identifies nine conditions of instruction which include: (1) gain attention, (4) present material to be learned and (9) enhance retention and transfer (Gagné 1985). Gagné was also involved in applying concepts of instructional theory to the design of computer based training and multimedia based learning (Wikipedia 2005).

In their lecture on Gagné's nine instructional events, Chandler, Philips & Stephens (2001) included ideas about Gagné's point (1) gain attention; in which they discussed how pictures, music, books, slides, computer programs and any other media can be used to gain students' attention.

Gaining students' attention is particularly important when teaching the MTV generation. They have been brought up on strident music videos interrupted with fast-paced adverts, put together with the single purpose of selling products and services to youth culture. As Edwards (2001) says "...one of the mantras of the marketer, get them when they're young". The actual main MTV web page has three moving and two static adverts all competing with a three dimensionally rendered moving MTV logo (MTV 2005). Thus the MTV generation are used to fast-paced, multiple-format delivery. My own experience in class (especially with games students) has been that, unless forbidden to, as soon as they log-on to their computer in a workshop they automatically load up Microsoft Messenger (Microsoft 2005a) to chat to their friends and thus they are already splitting their attention whilst working through worksheets or online material.

Other television programs have begun using multiple displays and moving images to enhance their delivery. Programs such as the ITN lunchtime news broadcast now feature the presenters standing in a virtual studio, whilst presenting facts and figures about the current conflict in Iraq (ITN 2005). Often on satellite or digital television, news reports will have a selection of moving images down one side of the screen for other reports you can select interactively, plus scrolling information bars featuring breaking news and so forth.

During my own experience of studying at University in the late 1990's, a dry lecture on the subject of image manipulation, from a professor who used simple plain text overheads, did not hold my attention as much as the subsequent lecture by a dynamic lecturer using PowerPoint presentation software (Microsoft 2005b) to illustrate examples and an actual image manipulation software package to demonstrate principals. This use of information technology held my attention and was very informative and followed Gagné's 4th condition of instruction: present material to be learned. My own experience therefore has given me something to use as a benchmark when teaching my students. The interesting question, now I have no contact with the lecturer concerned, is, had he studied Gagné's conditions' of instructions? Now having absorbed the knowledge that he presented, I have retained that knowledge and transferred it to my students thus fulfilling Gagné's 9th condition of instruction: retention and transfer (Gagné 1985).

• **How we can use sound and video to convey meaning**

It has long been known that the idiom, a picture paints a thousand words (Barnard 1921) can be demonstrated to be true or there would not be a use for common iconography we see around us, for example the stop and give way sign at a road junction (HMSO 1992) and the use of photography in newspapers and magazines.

In my teaching I have used both audio and visuals to explain meanings and also to gain attention and identify with my target demographic of mainly eighteen to twenty-three year old students. Using music as a stimulus and to enhance learning has been found effective in the classroom (Macgilchrist & Buttress 2005). I have tried using background music and in some cases found it effective especially towards the end of semester; some students however found it unusual and thought I was 'not supposed to do that in class'. More effective has been my use of audio visuals when presenting concepts to learners.

There are three specific examples that I can use to illustrate using audio and visuals. Firstly in a sound for games lecture I used an interactive PowerPoint slide to explain the concept of positional sound in a game. I asked for a volunteer to come out to the front of the class and using the interactive white board pen click on a game character to the top, left and right of an example taken from the game Doom 2 (ID 1994). The character growled from the corresponding speaker, thus conveying the idea of positional sound in game relaying information to the player. Secondly I used on a PowerPoint slide a video extract from Terminator 2 (Cameron 1991) to explain the concept of synchresis (the forging between something one sees and something one hears). Thirdly, I used a sound clip on a PowerPoint slide from a war scene in Firefly (Whedon 2001), to draw the attention of students to a quote from a world war two combatant. The slide quoted his experience of how a real battle sounded compared to what he had heard at the movies.

The examples I have used work in the cognitive domain (Fulk 2000) and on reflection I would propose that this presentation style uses a constructivist method of teaching,

in that I use examples that identify with the students own experiences and familiarity with the extracts; which hopefully enables them to make their own meanings from the dialogue I engage in with them, until I get across the concept I am attempting to convey (Atherton 2003).

• **Incorporating audio visuals into teaching**

Moving images: in a still scene the human eye will be drawn to movement (Lasseter 1999).

The interactive whiteboard is becoming more and more popular in educational establishments (Miller, Glover & Averis 2003). The department where I teach has two interactive whiteboard systems with sound and my son's primary school has an interactive whiteboard in each classroom. The interactive whiteboard can be used merely as a projection screen for material, it can be used to demonstrate software, substitute for the traditional whiteboard and marker pen or it can be used interactively by students coming to the front of the class. This presents us with new possibilities for learning and teaching.

When giving lectures and seminars to students we are presenting information. One of the most popular classroom tools is PowerPoint (Microsoft 2005b). PowerPoint can display simple text, video clips or it can be used interactively. However the use of such software is dependent on content and the skills of the presenter. Recently in a discussion with a regional cable television provider, there was a discussion surrounding the use of prepared materials provided by such companies to use in school. Obviously part of this idea is to generate profits, the argument put forward was to ensure that a quality assured level of material delivery was provided to all schools who bought into the scheme. Such material however according to O'Hagan (1998) can have quite the opposite effect to the one desired. For instance when a video is shown for a constant thirty, sixty or even ninety minutes the students disengage from the material because they become bored with the constant barrage of information from one source. Recent television factual based instructional programmes haven't taken account of this and follow a similar trend to that of action films in that they change pace frequently, with such tricks as using computer generated imagery to portray dinosaurs in modern day London as featured in *British Isles: a Natural History* (Cole 2005).

In my teaching I have tried to illustrate my lectures and seminars with material that gains and retains the attention of students. I try to stimulate their cognitive development through the use of audio and visual components. This style of teaching is constructivist in nature and identifies with both the subject and the student demographic being taught. As Intrator (2004) says "Nothing deflates a teacher more than bored students", and any technique which prevents this can be considered to have value. Feedback from my students has suggested that they find the use of audio and video in my lectures to be both attention-retaining and to aid in the explanation of concepts. The students have also commented that the use of actual footage from media has helped them to relate theories to the practices of media production. Therefore I would conclude that the use of such aids in teaching this area is more than just a 'gimmick', but is a valuable tool to facilitate students' learning.

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