Mike Jaques

PGCE Year 1

# “Teaching Strategies”

Tutor: Rob Bullard

Middlesbrough College

# Teaching strategies

**Introduction**

The three teaching strategies I have opted to discuss are:

- Demonstration / Examples
- Assignments / Workshop
- Competition (experiential)

For the purposes of this assignment I am basing all of my descriptions on the teaching strategies I adopt for the BTEC Media year 1 class. The courses I teach are Computer Graphics, Web Design and Computer Animation, all of which are predominantly computer based.

## Demonstration

**Why chosen**

Of the three strategies listed above, my most commonly used teaching strategy is undoubtedly demonstration. Geoffrey Petty refers to demonstration as a 'Doing-detail: What we learn by being shown how' that is 'so vital for learning physical and intellectual skills' (Geoffrey Petty, 1998, p.19 and p.145). The majority of my lessons are based on a "doing" or "show and do" model. I have a strong preference to teach in this way as I strongly agree with Geoffrey Petty's view that 'perhaps the most natural way to learn is by imitation' and 'the method is almost 100 per cent successful!' (Petty, 1998, p.145). Using the interactive white board I am able to demonstrate to the students each step of a technique – e.g. building a web page using tables, creating a motion tween, using layer effects. These are predominantly psychomotor skills, although they also require a Cognitive aspect. Within Bloom's Taxonomy the use of demonstration falls into the psychomotor domain, 'learning practical skills' (Petty, 1998, p.24).

Following the demonstration of each step I ask that the students repeat the steps on their own computer. This 'student practice' (Petty, 1998, p.145) reinforces the demonstration and helps the learner to develop understanding. I then follow this with a series of individual or small group mini tasks incorporating the skills I have taught. This type of teaching can be categorised as 'Supervised student practice' (Geoffrey Petty, 1998, p.170). These tasks always require the student to use the newly taught skills in a slightly different way than they were used in the demonstration – thus encouraging their cognitive understanding. On occasion I have found that I may have made the task too difficult or have been too vague. However when this has occurred I have made a note of the problem and tried to rework the task as required.

To supplement each session I also provide each student with handouts containing the tutorials we will be following. My aim is that this process encourages learning and retention. My belief, formed through personal experience as both a student and a lecturer, is that within the subjects I teach the students benefit most from hands-on experience. To successfully understand the software and its uses the students can only learn so much through observation and lecture. There is no substitute for self-exploration and personal experience – although also having a lecturer present is important as problems and queries can be sorted quickly.

When problems occur with the handouts, tasks or demonstration I ensure that I amend my handout, to avoid repeating the problem with a different class. In recent months I have also sought to differentiate the tasks through expanding them and including differing difficult levels. This is to avoid a situation in which the quicker students are left waiting for the slower students. It also helps to provide the quicker students with a challenge that will help them to further develop their skills.

Some of the advantages of demonstrations, as stated by Reece and Walker (Teaching Training and Learning, 2000, p.165), are:

- better than a verbal description;
- pace of demonstration can be varied;
- students usually enjoy actively doing things;
- key points can be stressed and repeated;
- students see the sequence and build up;
- may allow students to ask questions.

However there are also distinct disadvantages:

- a poor demonstration can be frustrating for the students;
- can be too fast or too slow for the learners;
- may be difficult to see;
- may be too long leading to a loss of concentration;
- students can be passive;

Any demonstration session 'must be well prepared, key points identified, learners involved and must be followed by individual learner practice and feedback' (Reece and Walker 2000, p149).

**Advantages / Disadvantages + Constraints**

My own experiences support these statements. Undoubtedly when teaching IT and New Media the benefits of using demonstration as opposed to many of the other strategies are considerable. Although there are disadvantages, these are greatly outweighed. Being able to show the students what buttons I am using, what menu options I am selecting, where I am clicking, and what I am typing, greatly improves their understanding. "A picture is worth a thousand words" (Confucius, 551-479 BC) has never been truer. The opportunity to use an interactive whiteboard has also improved the situation. Last year I taught all of my lessons using handouts and one-to-one demonstrations. This was the best option available to me at the time as the College had not installed an interactive whiteboard, and obtaining a projector

was problematic. Although all of the students passed the courses, my feeling was that many of my lessons were tedious, and several students were not comfortable in using all aspects of the software. Furthermore those students that suffer from Dyslexia found it hard to follow the handouts. Some of these problems were expected, as the subjects I teach require the use of industry standard software. This software is not ideally suited for beginners, due to its complexity and steep learning curve.

**Success and Refinements**

Following the installation of the interactive Whiteboards my feeling is that the lessons have improved considerably. Through demonstration I am now able to show the students the processes involved and clarify actions. I also still ensure that each student has a handout to support all of my lessons. However whereas in the past I have provided the students with individual handouts for each session I now provide a complete manual containing all of the tutorials that we will cover during the course. The benefits of this are that the manual can be used as a revision aid, whilst also allowing the stronger students to work ahead, or those students who have fallen behind or missed lessons to catch up the work. The result has been an increase in student activity, student participation and interaction, and peer teaching. I also feel that I have benefited, as I am now able to reiterate and demonstrate key points to the whole class rather than individuals. In the past I have also experienced problems due to using different versions of software. For example this year I was assured that I would be teaching Dreamweaver MX, a new version of Dreamweaver that was released two years ago. Having been informed of this I produced my course handout based on the newer version. However upon arriving back at the College after summer I found that we would be using Dreamweaver 4, an older version of the software. This can drastically affect my handouts as several commands have been changed and menu items have been relocated. To change all of my handouts would be extremely time consuming. However the use of the interactive whiteboard now allows me to demonstrate the differences and changes, and I can simply ask that the students amend their copies. This coupled with encouraging the students to ask questions has improved my time management of the class and allowed me to better plan my lessons.

In future I hope to refine several of my lessons and tutorials. I have used this year as a testing ground and have repeatedly amended my copy of the handout, making notes on errors, changes I made during the session, the time taken for each topic, tasks that I have set the students, problems I encountered, and new topics that I will include next year. My biggest challenge has been in trying to make the topics and each session interesting, and keeping the students' attention. Spending too much time demonstrating techniques whilst the students follow can become tedious. Therefore at regular intervals, whenever the opportunity arises, I try to set the students a task that encompasses the skills I have just demonstrated, as well as skills that we have covered in previous sessions. This method is similar in style to the strategy commonly known as '10 + 2' (Ten Plus Two) wherein the "teacher presents for ten minutes, students share and reflect for two minutes, then the cycle repeats" (http://glossary.plasmalink.com/glossary.html). However rather than simply ask the students to discuss the topic I ask them to complete a task, and encourage discussion. These intervals break up the monotony of the session whilst also encouraging the students to experiment. I also try to make these tasks fun, such as "draw the person next to you", "draw a house on a hill, with trees and birds", "animate a ball hitting a person". However creating an interesting task is not always possible, particularly in some of the more technical sessions. This is a problem that I hope to address by rethinking the session structure and content.

**Forms of Communication – developed lesson content and classroom relationships**

As I have stated above, the introduction of the Interactive whiteboard has, in my opinion, dramatically improved the sessions I teach. The whiteboard allows me to clearly demonstrate what options I am clicking on, what parts of the screen I am using, and how the website / animation / image is progressing. I am also able to clarify problems, add emphasis to elements, re-demonstrate techniques as needed, and demonstrate additional techniques that were not included within the handout. All of this has greatly increased the effectiveness of my communication. The down side of this is that it could be argued that it has also reduced the amount of one-to-one communication that was common during my previous years teaching.

Before the introduction of the whiteboard I relied on handouts and tutorials, along with one-to-one discussion, to communicate many of the techniques. Although this often required more time and sometimes resulted in problems, it also meant that I spoke to the students individually and was able to show the techniques on a more personal level. However overall I feel that my teaching as improved and I can see clear evidence of this in both the behaviour of the students and the level of attainment.

Another vitally important element of my demonstration is the supplemental handout / course booklet. As a visual aid the handouts offer an alternative to the demonstration, as well as a reference. The handout structure closely follows that of the demonstration – so closely in fact that I follow the handout when giving the demonstration. The handouts also allow the quicker students to work ahead, or the slower students to catch up. Although Petty states that 'it is inadvisable to give out more than one or two A4 double-sided handouts per hour' I would disagree. Where a handout is being used as the primary means of communication then I would agree. However where a handout is supporting the demonstration, and providing both clarification and reference, then a well created hand out can be invaluable. In my opinion setting a limit on the handout size is ridiculous. Rather you should ensure that the handout is visually stimulating, informative and useful. Big blocks of text should be avoided. The handouts I produce are full of screen shots and diagrams that help to illustrate the key points. Additional text is sometimes included but this is intended as additional reading for the stronger students.

**Justification**

Using Geoffrey Petty's 'Learner's needs' model (Teaching Today, 1998, p.18) the strategy of demonstration is the second element of the 'educare?' mnemonic. These needs are stated as 'explanation, doing-detail, use, check and correct, aide-memoiré, review, and evaluation'. However to supplement the demonstration I also ensure that I use additional strategies to improve my teaching. Therefore the complete 'educare' model can be mapped to my strategy as so;

**Explanation** – I start the session by giving an overview of the subject we will be covering i.e. show an example web site, animation, image. In this I try to highlight how the technique we will be covering has been used to create a particular effect.

**Doing-detail** – The demonstration not only shows the learners what to do but also how best they can do it. They should also be able to clearly see whether they have followed the procedure correctly.

**Use** – I then ask the learners to complete a task. These vary from mini tasks that may take 5 – 20 minutes, to major tasks that may require 30 - 60 minutes. This task encourages practice and enables the learners to use the technique on a 'real' problem.

**Check and Correct** – As the learners are working on the task I am able to observe each student and speak with each on a one-to-one basis. This allows me to monitor progress, clarify issues, further explain the technique and ensure that the technique was understood.

**Aide-me moiré** – To supplement the session I ensure that each learner has access to the course booklet. This contains all of the tutorials we will cover as well as details of each task.

**Review and revision** – In order to review and evaluate the learners' progress I set interim assignments. These are not necessary for completion of the unit but allow me to check progress and highlight problems. In essence these assignments are extended major tasks.

**Evaluation** – The interim assignments also provide an opportunity to evaluate each student. Two of the units in which I teach only require the submission of one assignment at the end of the course. The introduction of interim assignments provides an opportunity to catch problems early. The use of assignments will be dealt with in more detail in the next section.

**?** – During the task phase of the sessions I am able to move between the students. This provides an opportunity for the shyer students to ask questions. By introducing assignments I am also able to open myself up to questions on a one-to-one basis – I will discuss this more in the following section.

**Assignments / Workshop**

As discussed in the previous section, in order to monitor student progress I set around between 2 and 4 assignments per unit. This is also the norm throughout most of media and photography within the College. Rather than seeing assignments as an isolated teaching strategy I agree with the view that they can be used 'in the development of skills' (Reece and Walker 200, p165) and 'assignments give the students an opportunity to use – that is, to practice and to apply – their skills and knowledge.' (Petty, 1998, p.250). I see the assignment stages of my courses as being opportunities to develop and evaluate learning, although obviously, they can also be an invaluable learning tool.

The format of the assignments I set is usually non-restrictive to the student. Rather than set specific tasks I encourage experimentation through fairly open briefs. The kind of assignment we set is "Create a portfolio web site that will showcase examples of your work", or "Create a 3 minute (minimum) cartoon animation on a story of your own devising". Obviously the briefs I supply to students have far greater detail, however the brief is always open so as to encourage the students to choose a subject that interests them, and also to ensure that I am not restricting the stronger students. These assignments are either essential parts of the course, or, as mentioned previously, are interim assignments that will not be externally assessed but are used to highlight problems. This is not to say that the interim assignments are merely for my records. Each interim assignment has the potential to be amended by the student and then resubmitted as their final piece of work.

In order to complete these assignments I allocate the students workshop time. This replaces the demonstrations and can last anywhere between 2 weeks and 2 months. This workshop enables the students to progress their assignments and discuss their progress with me.

Some of the advantages of workshops, as stated by Reece and Walker (Teaching Training and Learning, 2000, p.165), are:

- can be a good basis for problem solving;
- teachers can talk with the learners on a one-to-one basis;
- reinforces learning in a realistic and meaningful way
- students work at own pace;
- students can work in groups.

However there are also distinct disadvantages:

- can be seen as tedious or boring;
- expensive in terms of time, equipment and rooms;
- teacher may lose control of learning.

For the assignments that I set the students are able to achieve a referral, pass, merit or distinction. This provides scope for high attainment, whilst also ensuring being relatively simple to acquire a pass, if the student has attended all of the sessions.

**Why chosen**

Unlike many other courses it is not possible for me to ask the students to complete the assignments out of class. The software we use is extremely expensive, and is only installed on the machines within the two rooms in which I teach. Therefore the assignment / workshop time becomes a vital part of my teaching strategy. I am a strong believer that students learn

by doing rather than being told. This is a basic human trait and, in my experience as a student, is often disregarded, particularly by academics and FE lecturers.

By designing and utilising 'integrated assignments' (Petty, 1998, p.256) I have hoped to reinforce the students' learning through setting 'real' briefs. For example in the web design unit I set an interim assignment that asks the student's to work in pairs to produce a 4 page (minimum) web site about their favourite band, movie star, football team. Along with this I also ask them to produce a written tutorial that can be used to reproduce the web site in its entirety. By setting this small assignment I am able to assess several different aspects of the students progress. I am also able to team up the strongest students with the weakest students in order to encourage peer learning.

**Constraints**

The main drawback to using this strategy is the attitude of students. In order to make the sessions more interesting I encourage discussion and self-autonomy. Through "Assignment planner sheets" the students are encouraged to set goals for each session and I try to monitor their progress through observation and direct questioning. However some students seem to have the attitude that they will try to do the least possible they can and only at the last minute. The result is that some students see these workshop sessions as an excuse to chat with their friends, miss the session, or complete other work. Although I have actively tried to discourage this behaviour it causes many problems.

**Success and Refinements**

In order to counter this attitude I have tried to oversee each student's work and ensure that they have set clear goals for each session and are on deadline. However where a student has failed to produce any work it is difficult to force them to do it. Rather I have learnt to try to discuss the problem with the student and emphasise the importance of planning and meeting deadlines. In many cases this approach works, however in some cases it does not. Often this

may be due to external influences on the student such as family problems, relationship troubles or other issues. In these cases I try not to exert additional pressure.

Overall I feel that the combination of demonstration and assignment sessions work well. The assignment sessions provide an opportunity for the student to put the techniques and theory in to practice, whilst also throwing up many problems that they need to solve. In my opinion there is no substitute for personal experience and learning from your own mistakes. I see my role throughout these sessions as an advisor. I also try to ensure that each student is clear of what they should be doing and has the necessary resources to proceed.

**Forms of Communication – developed lesson content and classroom relationships**

The assignments and workshops give me an opportunity to work with each student on a one-to-one basis. I see this as an important part of my role as a teacher as not only can I assess the students' progress but I can also discuss other issues that may be affecting their work. Due to our location and catchment area we often teach students who may have difficult family lives. In some cases the external pressures they are under can severely affect their college work. By talking with each student on a one-to-one basis it is sometimes possible to identify which are finding it difficult to cope, and in these cases it is often best not to add to the situation. Rather I am then able to discuss my concerns with their personal tutors and try to provide some additional support. I also find that I can strike up more of a rapport with the students on a one-to-one basis. I am able to talk with them informally and ascertain what they find interesting and what they find boring. This can help me to plan and re-plan my sessions. I also like to think that by talking with the students and chatting about their interests, even those that are not related to the subject, I am making myself more accessible and hopefully making my sessions more fun.

A more common occurrence during sessions is that a student may have fallen behind and been too embarrassed to say anything, or they may have missed several sessions. With the often complex, technical software in which I lecture I often find that students are too shy to

ask a question in front of the class as there is so much terminology and they are possibly afraid of embarrassing themselves. I am then able to use this workshop time to go over the techniques and issues that they are finding difficult and work with them as they work on their assignment. Many students find it easier to learn on a one-to-one basis, but obviously this is not always possible do to resources and lecturers' time. I am sure that on occasion I am guilty of using overly complex vocabulary, as is often one of 'the main faults inexperienced teachers showed' (Kerry 1982 cited in Petty 1998). I am also guilty of talking too fast – referred to as 'teacher talk' (Petty, 1998, p.127). However this is something that I am aware of and am consciously trying to correct and has been helped by my use of the interactive whiteboard.

**Competition (experiential)**

As the first term is nearing completion it is common for students to start the "wind down" process. This usually manifests itself as a lackadaisical approach to lessons. Usually this can be countered as the first set of assignments are nearing deadline - the two weeks leading to Christmas break then become manic. However within two of the subjects I lecture, the students are only required to produce one final assignment. This means that as Christmas approaches the students seem less receptive to taught sessions and become more active. CIT Computer Animation is one of these courses.

To try to assist the learners' information retention I created an interim assignment for this unit. However I purposely set the deadline for early February in order to prevent giving the students too many assignments at any one time. In previous years the students have been required to submit 6 – 8 assignments in the week before Christmas. The result has been extremely stressed students, stressed teachers and an increased in student drop out rates.

As the students were not required to work on an assignment, rather than use the last two weeks as a chance to relax and let the students take things easy, I thought that I would try to incorporate an educational game in to the sessions. I devised a game that required the

students to produce work in an, hopefully, entertaining, interesting way. This idea is sometimes referred to as edutainment.

The idea that I conceived required that the group be split up in to small teams of 3 to 4. The teams would then be given a series of tasks to be produced as animations using Macromedia Flash. I provided each team with a list of animations. They were then required to select which animations they were going to try to produce. The list included around 20 different animations, however the students could choose to do as few or as many as they preferred. Some of the animations were ranked as difficult and therefore were worth double points. The teams would work together, over the course of two one and half hours sessions, to produce the animations and then judging would take place. The judging required that each student would review the work of each group and allocate between 1 (poor) and 10 (good) points per animation produced. The team that had the most points at the end of the second session would win. Strategy was important as teams could either choose to produce a number of smaller, easier animations that may only attract a small number of points, or alternatively they could concentrate on the harder animations to gain more points, but use up more time. As a reward for winning the competition the students could choose from a selection of Crisps, Chocolate and Soft Drinks.

The teams were selected by me in order to maximise the competition and improve the learning. I selected the 4 strongest students and split them into 4 teams. I then selected those students, who in my opinion, were the weakest in this subject and allocated them to each team. I then allocated the 4 remaining students based on personality and work rate. I was also careful to ensure that I split up those students who always worked together, as well as ensure that I did not put students together who did not get on with each other. The final arrangements needed a bit of tweaking and consultation.

At the start of the session I informed the teams of the arrangements and supplied each student with a handout that included the list of animations, the rules of the competition and a scoring chart.

Some of the advantages of a game, as stated by Reece and Walker (Teaching Training and Learning, 2000, p.166), are:

- can be fun;
- immediate feedback;
- teacher has time to observe students.

However from my experience I would also add that my game:

- encourages peer teaching;
- encourages the students to apply techniques learned to real problems and situations;
- motivated the students to revise and work out of class.

**Why chosen**

My rationale for creating the competition can be divided in to two distinct sections. Firstly I wanted to avoid the "Christmas wind down". I wanted to make the last two sessions fun and entertaining, but without wasting them. The students had worked hard all term (some of them anyway) and they deserved a bit of fun. However I still had to ensure that the students had retained some of the information they had been taught during the term, and that they understood some of the techniques we had covered.

Secondly I had realised that the class was split between those who were doing well in the subject, those who coping, and those that were struggling. Those that were struggling were also the same students that had fluctuating attendance. Poor attendance causes major problems as the majority of the subjects I teach have a quite steep learning curve and are systematic. Missing a session can result in a student falling badly behind. This is often worsened as I find that students are unwilling to try to catch up the work themselves. As well

as a revision task I had conceived the competition as a way in which I could encourage peer teaching. The stronger students would need to assist the weaker students if the team was to succeed. Also the students would be able to discuss and share their problems. The stronger students would also benefit, as the competition would act as a problem-solving task. The animations they were being asked to produce required that they combine the techniques that they had taught in new and creative ways.

My hope was that I was creating a situation in which each category in Bloom's Taxonomy was catered for. The weaker students could refer to their handbooks for help in creating simple animations. This required Knowledge (to recall the information), Comprehension (to translate the information), and Application (to slightly adapt the information to fit the list of animations). The stronger students would use the skills they had acquired to produce more complex animations. This would require Analysis (to analysis the techniques and determine which were required to create a complex animation), Synthesis (combine a range of techniques to create a complex animation) and Evaluation (to decide on which animations could be created in the time provided and which would prove more successful).

I saw this teaching strategy as an important experiment as I have always believed that learning is improved when the students have fun. This belief is supported by Geoffrey Petty who lists having fun as one of the seven reasons for wanting to learn (Petty, 1998, p.36). I also hoped that the students would benefit from peer learning, and trying to apply the techniques they had learned in a range of different situations.

**Constraints**

The first session of the competition went well. The students were very receptive to the idea and many seemed to relish the challenge. The only minor problem was that due to unexpected absences the teams needed to be tweaked slightly. Almost immediately the teams started to produce some excellent animations and the majority of the students contributed well, although one student had to be spoken to for trying to take a back seat.

The second session however was a complete non-starter. This was caused by the influence of other lecturers. My students had not completed a group assignment for a different unit and their lecturer was pressurising them to get it completed on the day that we had our session. The result was that none of the students had time to participate in the session and the competition had to be cancelled. What had been a good idea that was helping the students to revisit many of the techniques that we had covered was ruined due to external influences. I felt slightly aggrieved that another lecturer had not planned their sessions sufficiently to ensure that the assignments were completed on time. However I also understand that getting assignments in on time can be very difficult.

**Success and Refinements**

My feeling is that this teaching strategy would have been a success had it been completed. However I also realise that in hindsight the problems should have been expected. In the last week of term the students have a lot of deadlines to meet and they would rather use any available time to catch up on work rather than play games (you'd expect so anyway). It could be argued that I should have made the students participate in the game rather than catching up on their work. However I think that in doing this I would have alienated the class, the students would have lacked enthusiasm and the game would have been unsuccessful. In future I will try to plan this game for the first two weeks after a break, or maybe just prior to half term. I will need to look at the year and assignment planners to find a suitable two-week period. As all indications suggested that it would have been a success I am also going to try to transfer this idea to other units. My initial thoughts are that it may work for both Digital Imaging and Web Design. I will sure to report my findings.

Due to its potential success I am also hoping to introduce additional games in to my sessions. One idea that I believe may work is the "Back-to-Back" game as discussed by Paul Ginnis (Ginnis, 2002, p.69). This involves two students sitting back to back whilst one describes a particular image, and the other student tries to replicate it. My idea is to have the students try

to create a web site, animation or digital image. This will hopefully help to focus the students on the detail involved in using particular tools whilst also requiring them to correctly state the tool name sand functions.

**Forms of Communication – developed lesson content and classroom relationships**

On reflection I am able to assess the different forms of communication used within the lesson. Primarily my role as the lecturer was to verbally inform the students of the rules and requirements for the competition. I then ensured that each student received a copy of the printed rules along with a scoring sheet. This ensured that the students had a reference should they forget what they were expected to produce. The verbal information I gave merely acted as an introduction and overview.

**References and Bibliography**

Ginnis, P. 2002. *The Teacher's Toolkit*. 1st Edition. Crown House Publishing. Carmarthen.

Petty, G. 1998, *Teaching Today.* 2nd Edition. Stanley Thornes (Publishers) Ltd. Cheltenham.

Reese, I. Walker, S. 2000. *Teaching Training Learning – a practical guide*. 4th Edition. Business Education Publishers Limited. Sunderland.

http://www.infed.org/ [accessed 16th January 2004]

http://glossary.plasmalink.com/glossary.html [accessed 18th January 2004]