

Supported Experiments: Design Dept.

- **What I chose to do and why.**

The fun element of Product Design, and the reason why all students choose to study the subject no matter what age or ability they are, is the design and manufacture of products that are original to that student. Theory work is seen as a necessary evil that is only loosely connected with the creative and practical aspects of study.

At AS and A2, theory work accounts for 60% of the total exam marks and a large percentage of the student's time needs to be devoted to understanding and learning the necessary theory. Video's, demonstrations, outside speakers, visits to industry, and visits to exhibitions go some way to making this 'bitter pill' easier to swallow, but in the end, the process of learning theory has got to be made fun and the students have got to feel that what they are learning is relevant and that they are 'making progress'.

I chose 'mastery assessment' to base my supported experiment on in the hope that students would be able to monitor their own progress against short term targets I set and against the progress of their peers.

- **The brief I set myself.**

I set myself the brief of:

- making assessment of the mastery of theory an integral element of every lesson;
- making the process of assessment fun;
- using peer and self marking as a tool for learning.

- **What I did.**

I invested in enough white boards, dry markers, zip up folders and rubbers for every student to have a set.

I planned my lessons so that there was at least five minutes at the end for either verbal or board based testing of the theory covered that lesson

I made clear the key elements of the lesson that would be tested at the end (the students could make note of these or underline them in their textbooks).

The students were given time to learn for the test during the lesson.

Only about five key points had to be learnt at any one time but in a longer lesson I sometimes gave two tests.

In addition....

I photocopied (at great expense!) a lot of past papers with their markschemes and examiner's comments and set the papers under exam conditions. The students marked these in the same lesson and the markschemes were commented on to

highlight the connection between the expected answers and the marks awarded to them.

I also tried to summarise larger sections of the theory as 'brain maps' so a pattern could be seen between the elements. Photocopies of these were distributed and the students were encouraged to make their own notes in this format where appropriate.

- **What happened!**

The students really liked using the white boards etc. and said (affectionately!) that it reminded them of their junior schools.

I found that it was difficult to ask questions that only required one or two word answers but still ensured the level of questioning remained appropriate.

Distribution and collection of the equipment was time consuming and the novelty was only maintained if the boards weren't overused.

Doodling was part of the 'fun' but could be a distraction!

A supply of spare dry markers was necessary

Getting 'whole class', instant, feedback was really useful for assessing the success of the lesson (but it could be quite painful too!)

The students responded really well to past paper work and self marking. (They preferred this to peer marking which they felt couldn't be relied on.) At first they didn't really buy into the reasons for marking the papers themselves but, after doing the process a couple of times, they could see how it would improve their exam performance and learning. Absentees were keen to get hold of the papers and markschemes they had missed.

- **My evaluation and conclusions.**

I'm lucky that I teach students that are highly motivated for the most part but I would guess that all students working at this level would benefit from the activities I've tried. Most design students dislike learning theory but, equally, most enjoy the feeling of success that answering a question correctly brings and most enjoy the feeling of making progress.

The self marking of past papers really worked well. They carried the 'authority' of the exam board and its examiners and the students were keen to try and get 'inside the examiner's heads'. Limiting the use of past papers to teacher marked 'mocks' is a waste of time and teacher effort and (certainly with Edexcel Product Design papers) the markschemes are really useful revision material.

- **And next.....?**

I need to confirm my 'felt' conclusions with concrete student feedback in the form of confidential questionnaires.

I haven't done enough to consolidate one lesson's learning with a review at the start of the next. I've tried it but it's not yet part of the pattern of every lesson.

The 'brain maps' I've done need to be worked on to make them neater and more concise.

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