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PGCE Year 1

Aims and Objectives and Competences

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Element b: Aims and Objectives and Competences

This paper is structured to guide the reader through the processes I employed to develop the Aims and Objectives for one session within the CIT Computer Animation course.

I have structured the process as follows:

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Part 1 – Learning Outcomes

1.1 Course outline

Details of the course.

The unit I have opted to discuss is taken from the CIT Computer Animation module that I deliver. The unit is governed by Cambridge Information Technology and is intended to provide the learners with an introduction to computer based animation. The course subject is potentially vast; therefore we focus the module on using a particular piece of software, Macromedia Flash. The benefit of this is that the software is the industry standard for web based animation, and is also relatively simple to use, when compared with alternative industry software. However, as the software is industry standard it is has a steep learning curve and can confuse learners.

The subject is intended as an introduction to animation. The courser lasts 36 weeks, with one session of 90 minutes allocated per week. Due to the time I have to teach the subject I try to aim the course at a beginner to intermediate level.

The subject is not aimed at any specific age group. However this year I am lecturing to BTEC Media, BTEC Photography, and City and Guilds Television production learners. The majority of these learners are 16-19, evenly split between male and female. The entry requirements for these courses are 4 GCSE's at grade C or above or a suitable access qualification.

General Course and Subject Aims

The course module overview is stated as:

The Computer Animation module will suit all those who wish to use a microcomputer system, incorporating animation software, for the development of animation sequences, e.g. film makers, designers, artists for home entertainment, advertising, education, web sites etc.

The learning outcomes are stated as:

Successful candidates will have consistently and reliably demonstrated their ability to perform a variety of practical tasks unaided, and have shown an appropriate level of knowledge and understanding.

The final assignment:

The learner is required to produce an assignment that demonstrates their ability to use computer animation skills to solve a particular problem working to design brief. It is likely that the problem to be solved will arise from their own interests, although it might be their own response to a brief set by your Tutor.

Subject areas may include, for example, the production of animations to accompany a pop record, tell a story, advertise a product, or an interactive presentation.

1.2 Outcomes

Using the Russell and Latcham (1979) approach I have arrived at the following questions and answers.

What is it that I want my students to learn?

Rather than try to produce objectives for the full course I have instead opted to focus on one 90-minute session within the Computer Animation course. The session I have chosen was designed to introduce and teach the learners the following techniques:

- Animation
  - Motion Tweens
  - Shape Tweens
  - Shape Hints
- Drawing tools recap

To aid the reader here is a definition of a tween:

Flash can create two types of tweened animation, motion tweening and shape tweening.

- In motion tweening, you define properties such as position, size, and rotation for an instance, group, or text block at one point in time, and then you change those properties at another point in time.

- In shape tweening, you draw a shape at one point in time, and then you change that shape or draw another shape at another point in time. Flash interpolates the values or shapes for the frames in between, creating the animation.

Tweened animation is an effective way to create movement and changes over time while minimizing file size. In tweened animation, Flash stores only the values for the changes between frames.

How can I get them to learn it?

I hope to encourage learning and retention through a process of show and do, followed by setting a series of mini tasks incorporating the skills I have taught. Throughout the course I try, when possible, to utilise an interactive whiteboard. This allows me to demonstrate the techniques and skills. I also provide each student with handouts containing the tutorials we will be following. As we will discuss later within this report, the subject I am teaching requires a great deal of hands-on experience if the learner is to successfully understand the software, its uses, and the theory.

How will I know if they have done so?

Throughout the course and during each session I try to incorporate a series of mini tasks that are aimed at checking the students' comprehension and learning. The course requires that a single piece of work be submitted for assessment. Through setting mini tasks and additional intermediate assignments I hope to be able to effectively monitor the students' progress and identify those with problems.

1.3 Aims and Objectives

The starting point for developing my intended learning outcomes is to define the aims for the course and the specific session I am focusing upon.

The **General Aim** of the subject is stated within the course documentation as:

> "The learner is required to produce an assignment that demonstrates their ability to use computer animation skills to solve a particular problem working to design brief. It is likely that the problem to be solved will arise from their own interests, although it might be their own response to a brief set by your Tutor."

For this specific session I have defined my **Session Aim** as:

> "By the end of the session the learner will be able to correctly identify, create, and manipulate tweens to create effective animations."

Now I have defined the generalised aim for the session I can begin to create my objectives. This is necessary, as my aim does not clearly state my intended learning. Rather it simply provides an overview or synopsis to the session.

Objectives:

The Objectives I have set for this module are:

General Objective:

- At the end of this 90-minute session the learner will be able to produce, in Macromedia Flash, three, fully functional, sample animations using a Motion tween, a Shape tween, and a Shape tween with shape hints.

Specific objectives:

Upon completion of this 90-minute session the student will be able to successfully:

- Create simple shapes and illustrations within Flash, using the range of drawing tools.
- Correctly create a Key Frame, convert an object to a symbol, and insert a motion tween to smoothly animate a square from one side of the screen to another.
- Correctly create a Blank Key Frame and insert a shape tween to transform a circle in to a square.
- Create / draw a simple camel outline, then correctly create a Blank Key Frame and create a simple penguin outline. Complete the animation by inserting a shape tween and using shape hints, to transform the camel into the penguin.
- Design a simple animation of a car driving and a bird flying, using shape tweens and motion tweens.
- Understand the different uses for shape and motion tweens, and be able to make an informed choice when creating an animation.

Product or Process?

These objectives can be split in to two distinct categories: Product Objectives and Process Objectives.

Objective	Product / Process?
Create simple shapes and illustrations within Flash, using the range of drawing tools.	**Product –** learning is observable and concentrates on the output.
Correctly create a Key Frame, convert an object to a symbol, and insert a motion tween to smoothly animate a square from one side of the screen to another.	**Product –** learning is observable and concentrates on the output.
Correctly create a Blank Key Frame and insert a shape tween to transform a circle in to a square.	**Product –** learning is observable and concentrates on the output.
Create / draw a simple camel outline, then correctly create a Blank Key Frame and create a simple penguin outline. Complete the animation by inserting a shape tween and using shape hints, to transform the camel into the penguin.	**Product –** learning is observable and concentrates on the output.
Design a simple animation of a car driving and a bird flying, using shape tweens and motion tweens.	**Product –** learning is observable and concentrates on the output and **Process –** content is not so important, rather I want to see whether the leaner has understood the different uses and can experiment.
Understand the different uses for shape and motion tweens, and be able to make an informed choice when creating an animation.	**Process –** non-observable. I want to feel that the leaner has understood the different uses and will be able to make correct decisions relating to the tween they require. May test this with some observable task or questioning (**Product**).

1.4 Selecting the Domains

In order to evaluate my objectives I have tried to classify the objectives into the domains.

Outcomes	Domains
Create simple shapes and illustrations within Flash, using the range of drawing tools.	**Psychomotor** – manual skill
Correctly create a Key Frame, convert an object to a symbol, and insert a motion tween to smoothly animate a square from one side of the screen to another.	**Psychomotor** – manual skill
Correctly create a Blank Key Frame and insert a shape tween to transform a circle in to a square.	**Psychomotor** – manual skill
Create / draw a simple camel outline, then correctly create a Blank Key Frame and create a simple penguin outline. Complete the animation by inserting a shape tween and using shape hints, to transform the camel into the penguin.	**Psychomotor** – manual skill (Some elements of Cognitive behaviour – understanding – the learner must understand where to place Shape Hints and how this effects the tween / transformation).
Design a simple animation of a car driving and a bird flying, using shape tweens and motion tweens.	**Cognitive** – understanding
Understand the different uses for shape and motion tweens, and be able to make an informed choice when creating an animation.	**Cognitive** - understanding

Part 2 - Justification

I have tried to include some of the justification for the objectives and competences as I have collated this report. However here is an overview:

2.1 Objectives rationale

General objective rationale:

Using Mager's approach to writing Product Objectives I have tried to create a general objective for the session that includes the three elements that he recommends to reduce ambiguity. Although these three elements are intended to add specificity to the specific objectives I also believe that they have value when applied to a general objective.

For the general objective:

The **terminal behaviour** is "Produce". This is observable as the lecturer will be able to clearly see whether the learner has been able to produce the three animations and whether the animations fulfil the requirements.

The **conditions** are that the learner must produce the three animations within the software package – Macromedia Flash.

The **criteria** I have set relate to the time of the session. The session lasts 90 minutes, by the end of which I expect that the learners will have produced three examples of animation, and then have tried to produce an animation of there own design.

Specific Objectives rationale:

To create the specific objectives I have again tried to follow Mager's approach. This states that objectives should be written using "terms that describe only the specific observable behaviours as intended learning outcomes". Therefore I have structured the tutorials so that the learner is required to "Create", "Insert", "Design" or "Draw". All of which are active verbs. In completing the penultimate objective the leaner must also "Recall" the previous tutorials to be able to "Apply" them to create a simple animation incorporating a car and a bird. This task therefore requires Knowledge, Comprehension, Application, and Synthesis. I intend that Evaluation and Analysis will be covered once the learner has learnt the fundamentals of the software package.

I have also incorporated an element of Gronlund's approach as I felt that the learner needed to show understanding rather than just mimic the processes. The final outcome requires that the learner "Understand" the different uses for the tweens. Although "Understand" is vague and often non-observable, I thought that it was best suited. This understanding of tweens is difficult to measure as there are pros and cons to each type of tween and it is often a subjective decision as to which to use. Many Flash developers use different techniques to create similar effects.

Product / Process Objectives rationale:

I have included my rationale for each objective alongside the objective within section 1.3. In the main the objectives are Product based as in the early stages of the course I am teaching the learners how to use the software. However the final two objectives require that the learner display some evidence of the "use and application" of the knowledge and skills, and can therefore also be classified as Process based.

2.2 Checklist for evaluation of Aims

Do the aims cover:	
• Knowledge required?	Yes
• Skills required?	Yes
• Attitudes required?	Yes
• Personal development?	Yes
Do the aims identify priorities or are they all exclusive?	Yes - Exclusive
Do the aims identify competences to be developed as well as topics or subject areas?	Yes
Are the aims or practical use to the teacher or just decorative?	Practical use
Can the aims be used to write objectives?	Yes
Are the number of aims about right to be useful (not too many or too few)?	6 in total – seems about right

2.3 Domains rationale

The majority of the outcomes can be described as being firmly within the Psychomotor domain. Again this is due to the nature of the subject, particularly in the early stages when we focus almost exclusively on learning the software. However one outcome requires that the learner “design a simple animation”, and therefore its primary behavior is cognitive understanding, although its also requires psychomotor behavior. The final outcome almost entirely requires cognitive understanding, although, as I stated when discussing Product and Process Objectives, I may test the learners understanding with a task or exercise.

Although none of my outcomes fall in to the “Affective” domain I do feel that during my course I will build up to affective outcomes. The subject is mainly computer based but in essence it is an art form, and there is a deep level of appreciation and consideration that is necessary to achieve good results. The learner must consider the users experience, the message the animation will convey, the effect that colours and fonts can have on the communication, and display an appreciation for good design and illustration. These subjects will be covered once the learner has learnt the fundamentals of the software package.

2.5 The value of stating learning outcomes

Throughout the production of this report I have had to consider many elements that are required to produce an effective session. The repeated cogitation and collation has helped me to consider what it is I am trying to teach the learners and what the students will have learnt upon completing the session. By identifying the learning outcomes I had hoped that I would better be able to identify when the students had learnt and why this had occurred.

The value of setting distinct aims at an early stage cannot be underestimated. By thinking through what the generalized aim for the session I was then able to focus on the learning outcome, and refine the ideas to break the session down into distinct general and specific objectives. This process is, at times, somewhat confusing and I am unsure as to my success.