

Notes for Course Developers

Multimedia Development Life Cycle

Stage 1 – RATIONALE

Start with a clear statement of what you want to achieve and test your developing ideas against this.

Find some good reasons for dedicating your time and creative energy to this project.

- Why are you doing it?
- Who is it for?
- Who will contribute?
- What media will you use?
- When will it need to be ready?
- What is the scale of the project? What will it be?
- How will it be validated?



Stage 2 - RESEARCH

Look for what's already out there.

- See how other institutions are presenting their materials for an indication of quality and to borrow ideas. See what is delivered by the best institutions and aim to match it.
- Get a bunch of glossy prospectuses from other places for a "look and feel".
- Don't reinvent the wheel. Ready-made CDs may be preferable to time-consuming in-house development. It may be possible to adapt something that already exists to your needs.

Try and talk to students and find out what they love or hate.



You can start collecting assets at this stage.

Enthusiasm often leads people to start brainstorming ideas at the beginning of a project and we wouldn't want to discourage this, so try and combine your research with your initial specification.

Stage 3 – DISCUSSION and SPECIFICATION

We can't emphasise enough that time spent ironing out problems at this stage will avoid hours of reworking later in the project. So, brainstorm some ideas with your colleagues and meet some multimedia developers. We're here to help with design issues, time management, structure, planning and storyboarding your ideas. We'd like you to think about the types of activities you'd like, what skills are required, whether you will need help etc.

You'll need to consider issues such as:

- Methods of delivery – what is the minimum computer specification of the end user and how will that affect the media used? Perhaps you will need to consult ISS to confirm if they can distribute a resource (database, interactive tools etc) over the network if you decide buy a ready-made product. Who will host streaming video? Do you require plugins?
- Accessibility - Do you need multiple representations of the material? UNL is committed to providing equality of opportunity and accessibility to resources for all students. Students who are visually or aurally impaired need to be provided with alternatives to some media-rich online materials. This might involve providing sub-titles to a video or a text-based equivalent to a visual resource.
- Cost – authoring tools, site licenses, development time, reuseability.
- Learning styles – and methods of teaching. You could ask the students what they prefer in terms of structure, repetition, self-assessment, groupwork etc.
- Degree of tutor contact – including computer mediated communication, such as bulletin boards, chat rooms, email support.
- Navigation – represents the deeper information architecture.
- Interaction – What kind of feedback will be provided?
- Look and feel
- Copyright issues
- Protection- will this be a free public resource or a closed environment for selected users? Do you need individual passwords and tracking facilities for your students?

Things to be aware of:

Are your resources culturally bound? Equally interesting/applicable to men and women?

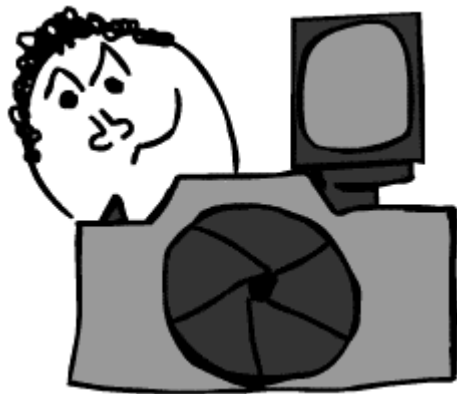


Stage 4 - COLLECTION OF RESOURCES

This includes written content, all graphics and other raw materials such as audio and video.

There is a shortage of copyright-free material in many fields, but you can create your own. Copyright prevents us from using other people's graphics, and collecting/creating illustrations can be very time-consuming.

We've heard estimates for the ratio of development hours (including all people involved) to actual student user hours range from 60:1 to 100:1. In other words, don't underestimate the work involved in producing high quality interactive resources!



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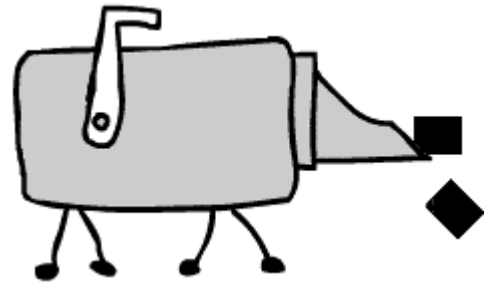
multimedia 

Media types

- ◆ Text – should be delivered to us in digital format for inclusion in animated presentations. You should be able to create your own html pages.
- ◆ Photos – Media services have a professional photographer with studio, lights, cameras, etc and can provide the developer with a high resolution digital image to work with. You will have to prepare a list of all your shots (making a storyboard will be useful), including actors, props, clothes, locations. Book the time with everyone well in advance. For the sake of professionalism and ease of use, there should be some sort of continuity - setting the scene in a familiar office, using the same presenter in the same shirt, same voice-over, same quality of photographs etc.
- ◆ Video – requires pre-production, where the piece of film is story-boarded, scripts are prepared and the scene is defined, so that shooting will go smoothly and time is not wasted on the day. Then you need to book performers and technicians and the studio for the day. Don't underestimate post-production time, for manipulating and editing the footage, possibly adding titles and effects, and outputting to a specified format.
- ◆ Illustrations – are very time-consuming. Often there is a copyright on the pictures that lecturers want to use and developers can get round this problem by tracing and modifying the image. But it can take a whole afternoon to draw one diagram.
- ◆ Animations – have the same problem as illustrations, but may be more rewarding for students. The lecturer needs to provide a storyboard – a sketch of the various stages of the animation, clearly labelled, and also needs to be prepared to spend time with the developer to explain the concept.
- ◆ 3D – we can create three-dimensional models and even animate them, but remember that such work is labour-intensive, so check if a resource already exists.
- ◆ Interactive tasks and virtual environments – are probably the most interesting part of the work for developers and arguably the most motivating for students. Problem-based collaborative learning is the jargon this year and the key to developing this kind of resource is having a good concept and being prepared to work through the idea carefully, trying to imagine the students' experience.

Stage 5 – PRODUCTION OF PROTOTYPE

At this stage we will be devoting a lot of time to your project. Development can be cyclical up to a point - by this stage, material has to be "signed off" as it is produced so that there isn't an endless cycle of amendments and tweaking. Our experience is that people sometimes think the whole process begins here, which inevitably leads to wasted time and diminishing expectations.



Think about user support

- How technically skilled do your students need to be to use this resource?
- Do you need to provide a tutorial or paper documentation for them?

It is important that the structure of the course (ie. the hierarchy of information) is established clearly at the beginning, so that a template can be built, with materials slotting into place as they are completed. No-one will be interested in changing the structure and redoing all the menus later in the life cycle...! Naming conventions for files should also be established, so there is no danger of work being replicated and/or over-written. This stage can be very exciting, as you see the ideas realised week by week and a sophisticated, stimulating, media-rich learning resource appears before your eyes...

Stage 6 – EVALUATION AND REVISION

Clearly, any professional resource has to be extensively tested, both for bugs and for ease of use by students. Squeezing the schedule to non-stop production leaves no time to analyse the nature of what everyone has been doing.

Ideally, a prototype should be launched first, piloted with a sample of students and time should be given for feedback to be assimilated into final working model. Users often spot incongruities that are invisible to developers, because we're working so closely with the material.

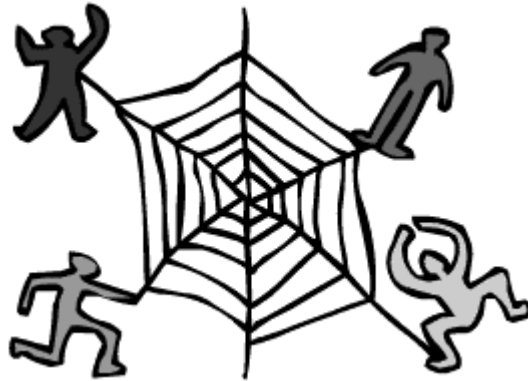


- Does the resource do what you wanted it to do?
- How do users interact with it and can you measure their level of satisfaction?
- And what has been your experience of this project to date?

We can help you design and deliver a questionnaire to find out users' attitudes. You'll also need to consider assessing learning outcomes.

Stage 7 – DISTRIBUTION

Now you can integrate the prototype into your teaching programme. Sit back and put your feet up – you deserve a rest...



Stage 8 – REFLECTION and FEEDBACK

The project doesn't stop here. You'll be getting more feedback from your students and the information can be written up into a paper or used to inform your next piece of development work.

Most resources need updating regularly, so maybe you can acquire the skills to do more of the multimedia work yourself and be independent.



Questions

- Can you frame the questions you would ask to students and developers?
- Will you want to change this resource?
- What's likely to go wrong?
- How does the team dynamics affect the development?

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