

Case study of e-learning project management: First and access year of Computer Science degree

Overall remit

To manage the creation of CDs to accompany existing print material for the [Diploma and BSc in Computing and Information Systems for the University of London External Programme](#).

Background

Students on the External BSc in CIS study at institutions but traditionally have been supported by printed 'Subject Guides' which provide background information to the subject. There grew a desire to complement this with more interactive material owing to increasing tendency for self study, and a grant became available from the External Programme for this purpose.

Time frame

September 2001-September 2004

Budget

£288,800

Components

Interactive CDs/web sites to accompany the following modules:

Diploma

Study Skills in English – 1 CD

Mathematics for Business – 1 CD

(NB Diploma is equivalent to A level in terms of standard)

BSc

Introduction to Programming in Java – 2 CDs

Introduction to Computing and the Internet – 2 CDs

Mathematics for Computing – 2 CDs

Introduction to Information Systems – 1 CD

URL

See selected CD sites on:

<http://www.adolphus.me.uk/portfolio1.htm>

Project activity summary

I was appointed in September 2001 to manage the project for two years; my contract was extended for a further nine months to complete the project.

Key stages

<p><i>Sept- Dec 01</i></p>	<p>Scoping</p> <p>The initial task was to develop a product specification which defined the project's scope, learning design, use and adaptation of existing material, key features, navigational style, interface etc.</p> <p>Having agreed the project's scope, the next stage was to define the technical requirements. It was agreed to use an external technical developer to develop a software shell template for the site interface design and the key interactive elements. This was done by a process of tender and a contract was awarded to a developer. A technical specification was then created and the decision made to develop using HTML and Fireworks for the template, and Javascript and Flash for the interactive elements.</p>
<p><i>Jan- May 02</i></p>	<p>Evaluation</p> <p>A prototype was created showing navigation, interface, key interactive elements, with content from four of the modules, and was then evaluated using questionnaires with both internal and external students. Because of uncertainties resulting from the responses to the questionnaire regarding ease of use, an observation was carried out.</p> <p>As a result of the evaluation the following changes were made: improved navigation with breadcrumbs and clearer side bar, site interface altered so that the page containing instructions on installing the necessary plug-ins was placed at the top level, the colours were changed from a rather dull grey, and the search function was refined with an improved search facility being created for a web-based version of the CDs.</p>
<p><i>June 02 – July 03</i></p> <p><i>Sept 03</i></p>	<p>Creation of first batch of material</p> <p>A schedule was created for the entire project using Microsoft Project.</p> <p>A decision was made to use the developer for the creation of the more complex interactive elements only and to do much of the development work in house; I was accordingly trained in use of the templates etc.</p> <p>The first batch of material, comprising Study Skills in English, Introduction to Programming in Java, and Mathematics for Business was developed according to the following stages</p> <ul style="list-style-type: none"> ○ Authors commissioned ○ First draft written ○ First draft checked for academic and pedagogical content ○ Interactive specification ○ Second draft written ○ Final draft edited; interactive elements complete ○ Develop alpha version ○ Author check alpha version ○ Beta version ○ Checking and testing ○ CD master <p>Study Skills in English and Introduction to Programming in Java published.</p>

<p><i>July 03 – July 04</i></p> <p><i>Sept 04</i></p>	<p><i>Creation of second batch of material</i></p> <p>The second batch of material, comprising Mathematics for Business, Mathematics for Computing, Introduction to Information Systems, Introduction to Computing and the Internet were developed according to the stages listed above.</p> <p>Mathematics for Business, Mathematics for Computing, Introduction to Information Systems, Introduction to Computing and the Internet all published.</p>
<p><i>Feb 04- July 04</i></p>	<p><i>Evaluation</i></p> <p>The first batch of material was evaluated by sending out machine-readable questionnaires to 2000 external students via their institutions. Responses from eight institutions were analysed and it was concluded that the response to the material was overwhelmingly positive.</p>

Main problems and how they were overcome

<p>Lack of up-to-date base material and revision to first-year syllabus, which meant a delay to the start of the project while the print material was re-written. This caused a strain to the budget and schedule.</p>	<p>I managed to secure a contract extension for a further nine months during which period the remaining CDs were produced, which I managed to do without going over the budget because I had been careful to include a large contingency; I also discovered some slack in the overheads. In the third year, when time was especially tight, I farmed out some of the development work.</p>
<p>Failure of academic authors to deliver content due to distance learning competing with teaching and research.</p>	<p>Incentivize authors through good payment; use retired authors (i.e. former departmental members who were familiar with the subject and syllabus) and external authors who had familiarity with department e.g. as external examiners; closely manage situation and develop ‘warm relationships’ with key individuals to encourage loyalty. Sack poor performing authors and either appoint someone else or in one case adapt material which we had been given permission to use.</p>