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Gaining a PILOT's Licence:

Supporting Researchers at Imperial College London through the Postdoctoral Information Literacy Online Tutorial

Introduction

Researchers have become our 'invisible users'. With the advent of Virtual Research Environments (VRE), full-text electronic journals, information portals and other digital resources being delivered direct to their desktops researchers no longer need to visit the library. Yet how can we, as librarians, be sure that they really know what resources are available to support their research and whether they are searching these effectively?

A recent report from the Research Information Network (RIN) and the Consortium of University Research Libraries (CURL) titled 'Researchers' Use of Academic Libraries and their Services' highlights the issue:

> "researchers must master an array of finding tools that themselves form part of the complexity of materials and services incorporated in modern digital libraries … Librarians and users must make sense of this cascade, and librarians must be the guides of users in this respect. Skills training is a big issue …"[1]

Experience at Imperial College London suggests that researchers are not only unclear about what resources are available but are also unsure about the publishing process in general. The RIN report also demonstrates that areas such as Open Access and institutional repositories are adding to the

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[1]Researchers' Use of Academic Libraries and their Services A report commissioned by the Research Information Network and the Consortium of University Research Libraries. (2007) Research Information Network & Consortium of Research Libraries.

researcher's confusion. In response, the library at Imperial decided to create PILOT (Postdoctoral Information Literacy Online Tutorial) a resource that would provide its research community with an overview of appropriate information sources pertinent to continually shifting world of scholarly investigation.

Aims & Objectives

Aim

- To provide a holistic overview of information and also focus on the rapidly changing world of scholarly communication

Objectives

- To reach a community dispersed over 9 campuses
- To ensure that the researchers can further develop their knowledge and research skills
- To provide researchers with a programme that allows them to create their own personal learning development plan
- To introduce researchers to the publishing process

Planning

Imperial has its own IL definition:

> "An independent learner who has the confidence and ability to retrieve, evaluate, exploit and manage information with an understanding of the legal, economic and social issues that surround the use of information.........is information literate"

The definition, along with a set of competencies, forms the basis of all IL programmes created by Imperial. Therefore, an initial course design document was created using the definition and competencies which gave an overall picture of the programme, its aims, objectives and learning outcomes.

This was required, not only as a basis for content development, but also because the programme was partly funded from the Postdoctoral Committee and it informed the process of cost analysis. The cost analysis included design work, content creation and marketing of the programme.

The planning process also included writing a project initiation document (PID) which gave an overall view of the programme, timescales, costs and human resource (both internal and external) that would be required. A full risk analysis was also undertaken. It was anticipated that the development of the programme would require cross-team working and the PID, along with a Gantt chart, ensured that the appropriate people would have capacity within their working week to meet the additional demands and deliver the project on time and to a high level of quality.

Design

Design is an essential part of a programme such as PILOT. The programme needed to have immediate appeal, look professional and be easy to navigate. The library Webmaster was given a clear remit as to what was required, along with a profile of the type of user at whom the programme was aimed. Once an initial design was approved the Webmaster worked closely with the project managers to 'fine tune' the design and navigation.

A deliberate decision was made to build the programme using HTML. There were several benefits to this:

- The files for the programme could be easily transferred between VLE's
- The files could be uploaded as a website if required
- Templates and cascading style sheets (CSS) could be created to make the programme easy to amend and ensured a consistency of look and feel to each unit
- Navigation could either be similar to a webpage or could be linked into WebCT navigation as required
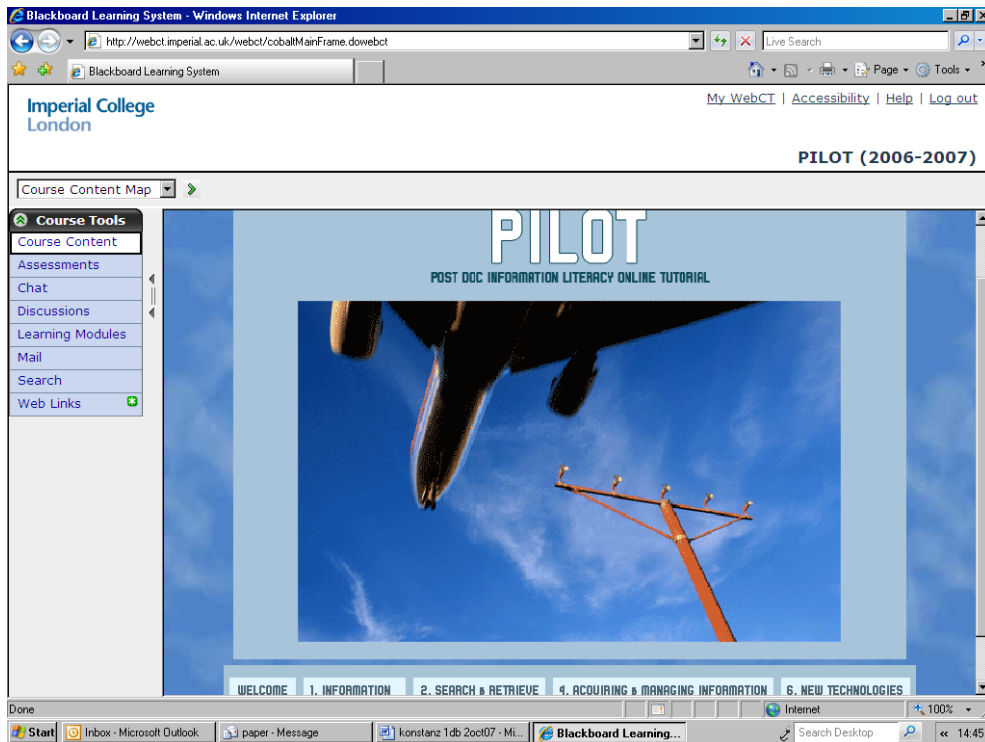
Figure: Image of the first page

Content development

As part of the planning process a mind map of content required for PILOT was created and the following 'content units' identified:

General units*:*
- Welcome
- Contacts
- IL Pilots License

The Welcome Unit was an introduction to the programme, outlining its aims and objectives and having a link to an online interactive tutorial which introduced learners to the programme and to the tools within WebCT such as the Calendar. The Contacts Unit provided details on who to contact for subject specific questions or IT problems.

Post graduates tend to assume they have good IL skills; however library staff were aware, from working with researchers, that they were lacking in

certain skills and additionally, that international researchers in particular had large gaps in their knowledge. There was therefore an issue about how researchers could be "encouraged" to look at units such as 'Search and Retrieve'.

The IL Pilots license was designed as a fun way for researchers to test their understanding of Information Literacy while allowing them to create their own personal development plan. Five short, but challenging quizzes were created in Adobe Flash multimedia animation format. If the researchers were unable to complete the quiz successfully, they were directed to add to their personal development plan the appropriate learning unit. All the quizzes had a science fiction theme which led the users through a 'story board' of flying a space ship through meteors and meeting Aliens.

Learning units:
- Information
- Search and retrieve
- Databases
- Acquiring and managing information
- Publication process
- New technologies

Each of the learning units had learning outcomes which informed content creation. A content analysis took place to consider what material already existed that could be reused or appropriately amended and what material would need to be created. Authors for each section were then identified.

Quality assurance of content was important to ensure consistency of approach throughout the whole programme. Research has shown that a programme which has different authors providing content can create problems for users who find the change in styles of writing difficult.[2] An editorial process was put in place to check not only grammar, spelling etc. but also to ensure consistency in writing style.

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[2] Boden, D. & O'Beirne, R. *Pop-i & LolliPops*. (Presentation) Umbrella Conference. June 2007. University of Hertfordshire.
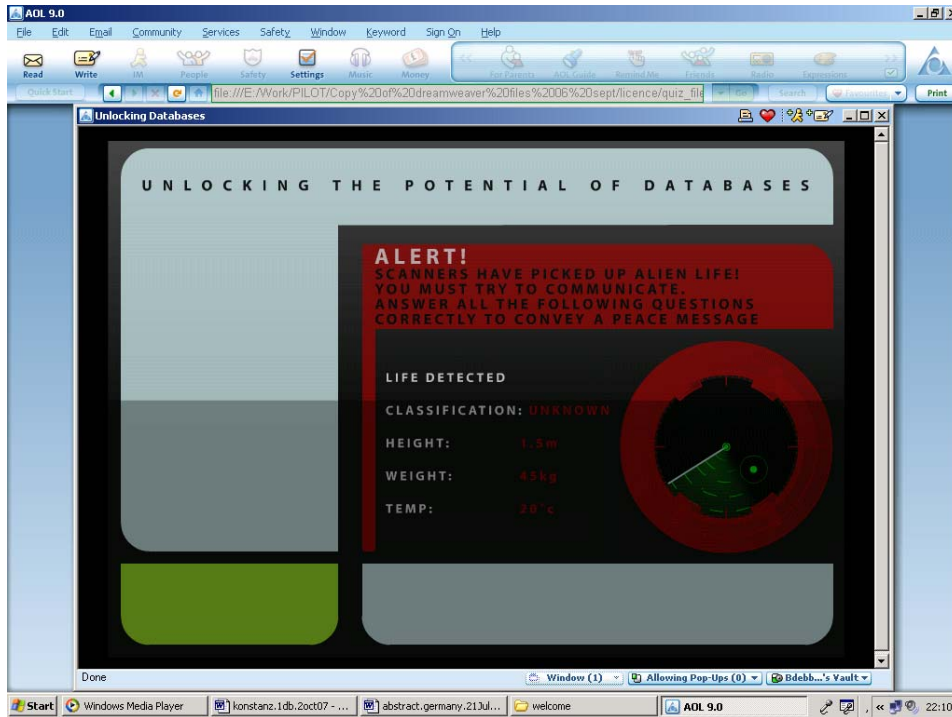
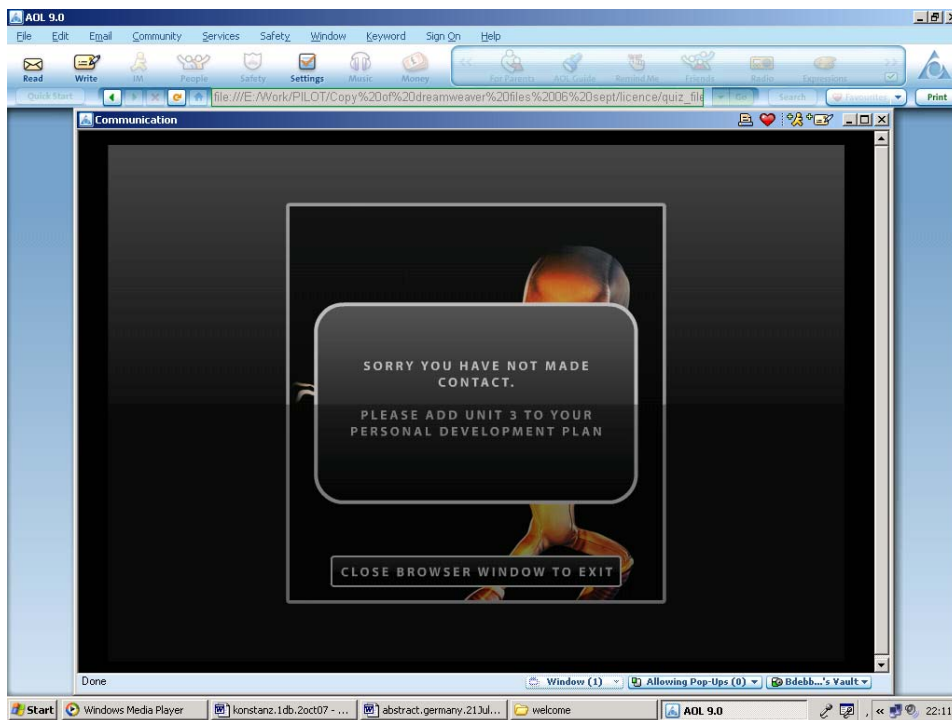Figure: Image of the first page of the quiz on Databases

Figure: Image of the last page of the quiz which directs the learner to add unit 3 to their personal development plan

The Imperial College London University has four faculties: Medicine, Engineering, Natural Sciences and Business & Humanities. The challenge therefore, was to create content that was appropriate for all faculties. Information literacy is a transferable skill and any IL programme has a generic core. Therefore, general examples were used in the following units: Information, Search and Retrieve and Acquiring and Managing.

The Information section looked at why information was needed and at primary and secondary sources. Search & Retrieve provides information on preparing the search, identifying key words and general Boolean searching. The Acquiring & Managing unit informed the researchers about gathering information via the Digital Library, organising information, the use of bibliographic software as well as guides to Harvard and Numerical referencing. It also had a section on plagiarism. This unit not only looked at plagiarism from the researcher's perspective but, as the Postdoctoral was often the first to teach undergraduates, it also provided information on student plagiarism. The section looked not only at why students plagiarise and the different types of plagiarism, but also surveyed the tools and information sources used to help students and to support them when teaching.

The database unit however, was split into faculty sections and provided information on key databases in each subject area. A description of each database was given and an Informs Online Tutorial[3] created for each database. The tutorials are popular as they allow users to learn to use a database in an interactive session and at their own pace. This unit also provided considerable information on the benefits of using MetaLib[4]. Importantly information was provided on their own search sets which would support their research through the use of multiple databases and other e-resources.

Researchers at Imperial are demographically spread which can in turn lead to a feeling of isolation. The new technologies unit focus is on tools that can be used for searching for information but also on tools which will also assist postdoctoral researchers to communicate with research colleagues, both

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[3] Informs software allows you to create interactive online tutorials and is freely available to FE / HE institutions in the UK via Intute.

[4] MetaLib is the universities library portal that allows cross searching of many of the universities databases and e-journals.

at Imperial and globally. The unit provides information on areas such as RSS feeds, Weblogs, Wikis, Social Bookmaking and tagging. Informs tutorials are provided to help researchers set up RSS feeds and information on De.licio.us, Flickr and Technorati are also provided. An issue with this unit is that it needs to be constantly updated if it is to remain current and of value.

The Publishing Process was the name given to a core unit within the programme because scholarly communication was seen as one of the key areas highlighted within the RIN report as an issue for researchers. The unit begins by looking at the area of Peer Review, explaining the process but also introducing researchers to the debate on how scholarly communication is affecting the process of peer review.

The area of Open Access is highlighted within the RIN report as an area which causes confusion amongst researchers. This section explains what Open Access is, what is Open Access archiving and outlines recent developments in Open Access at Imperial. This is an area where debate continues. The programme developers therefore made a deliberate decision to link to websites which provide information and current debate about Scholarly Communication and Open Access rather than be constantly changing the unit content. Information on Impact Factors and Repositories can also be found as part of this unit.

Copyright is complicated and can be a minefield for those who are not only publishing but also teaching, especially with the advent of Virtual Learning Environments and the application of new technologies in teaching. Part of the funding for the project had been set aside to commission a consultant to write this section (Dr Jane Secker of the London School of Economics). To ensure that this section remained current it was agreed that the library would then continue to find funding to pay for updates.

Marketing

A key part of the process of any new development is how that product is marketed. The cost of marketing the product had been budgeted for within the PID. It is essential, in today's economic setting, for libraries to demonstrate good value for money and innovation. Research has shown[5] that

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[5] Report on survey of skills training for researchers. Roberts Survey Report 2007**.**

PILOT is unique and therefore it was appropriate to hold a high-level promotional launch party within the university. The Prorector for Teaching and Learning was invited to launch the programme and invitations were sent to key members of the university and to postdoctoral researchers at all campuses. A cheese and wine reception was the focus of the launch event together with a large cake in the shape of an aeroplane. Library 'Goodie' bags were handed out which contained PILOT key rings', stress balls in the shape of aeroplanes and a PILOT flyer which gave information on PILOT and its benefits. The university marketing department was invited to the event and in return ran an article in the university staff magazine about the launch and the programme.

All Postdoctoral students were enrolled on the programme and received an email notification of how to get started. This was followed up with glossy A5 leaflets outlining the benefits of the programme to all involved in scholarly activity and research.

Marketing the programme was essential not only to the university and to the postdoctoral researchers but also to library staff. It is therefore planned to run 'road shows' at all the campus libraries along with hands-on sessions. This means that the library staff have an understanding of the programmes, its aims and ensures they can promote it appropriately.

The future

PILOT is not a static programme. As technology develops and the debate on scholarly communication continues PILOT will also grow, change and develop. PILOT is organic and continues to be a work-in-progress. The challenge is to ensure that it stays useful, relevant and appealing to its audience.