

The Virtual Training Suite: Internet Skills for Teaching and Learning

Introduction.

This paper describes the development of the RDN Virtual Training Suite which aims to support lecturers, students and researchers in finding and using resources on the Internet. It will provide an overview of the aims of the Virtual Training Suite and its content, focusing specifically on the social science related tutorials, which are available through SOSIG (The Social Science Information Gateway). It then gives some evidence of the way in which the tutorials are currently being used drawing upon the results of a recent evaluation study conducted by the University of Bristol and practical examples of its incorporation into the teaching and learning experience at the London School of Economics.

What is the RDN Virtual Training Suite?

The Virtual Training Suite¹ is a series of 40 free Web based Internet tutorials which have been funded by the Joint Information Systems Committee (JISC)², under their Distributed National Electronic Resource (DNER) programme, on behalf of Higher Education Funding Councils of England, Scotland and Wales³. The tutorials were created by the Institute for Learning and Research Technology, University of Bristol⁴ with input from 30 universities, museums and research organisations across the UK. The first phase of the project was completed in July 2000 with the launch of the first 11 tutorials which included titles covering the physical sciences, social sciences and the humanities.⁵ A further 29 were launched in May 2001⁶. Again these encompassed subjects from a range of disciplines, including engineering, statistics, government and social welfare.

The tutorials aim to cover a wide range of the academic subjects taught in UK universities and colleges. They also support the work of the Resource Discovery Network (RDN)⁷. This is a national Internet search service, which is being created, for academics and researchers based in British higher and further education institutions. It is composed of a co-operative network with a central organisation called the Resource Discovery Network Centre and a number of subject based independent service providers called 'hubs'. There are currently 5 hubs. Each has responsibility for selecting, cataloguing and classifying Internet resources in a particular subject field. BIOME –

by Heather Dawson*

health and life sciences; EEVL – engineering, mathematics and computing; Humbul – humanities; PSIGate – physical sciences and SOSIG – social sciences, business and law.

What are the aims of the Virtual Training Suite?

The Virtual Training Suite aims to offer a subject based introduction to locating and using Internet resources. Each tutorial addresses the needs of a particular subject community; taking them directly to the most important Internet sites and offering subject specific guidance on what they need to know.

It provides a flexible learning experience. All material is Web based and can be accessed from anywhere at any time of the day or night! Therefore users can directly control the pace at which they learn.

The tutorials are designed for use by both academic staff and students. They include specialist sections for both these categories of user in which guidance is geared to their particular needs. The student sections include information on finding materials for essays and citation style guides. The lecturer resource section contains tips on tracing online course materials and syllabi; case studies of how teachers have used the Internet and the facility to download the tutorial or print off posters for use in handouts.

The tutorials aim to provide a structured learning environment with clearly defined learning objectives. After completion of the appropriate tutorial, users should be:

- Aware of the range of types of material that can be found on the Internet and how these can be used to support their work
- Be able to identify the key Internet sites and resources for their subject area; know how to use effectively the main tools and techniques for Internet searching.
- Be able to critically evaluate the Internet resources that they find.
- The tutorials also seek to promote awareness and

effective use of the information gateways, which are being created by the RDN.

How was the Virtual Training Suite created?

The Virtual Training Suite was created by a consortium of authors from UK university libraries, academic departments, research bodies and organisations led by the Institute of Learning and Research Technology, University of Bristol. Contributors included: the National Institute for Social Work (Internet Social Worker); University of Manchester (Internet Anthropologist), Edinburgh University Data Library (Internet for Social Statistics) and the Data Archive, University of Essex (Internet for Social Research Methods). This collaboration was able to draw upon the existing expertise of subject specialists. They were able to identify key issues of concern for their subject community and gear examples towards them. For example the Internet Medic identifies out of date material as a problem with many health related Internet sites and provides guidance to users on how they might check the currency. Close contact with the academic community also enabled testing and provision of qualitative feedback on the structure and content of individual tutorials.

What do the tutorials contain?

All the tutorials were constructed using CALnet software⁸ developed in house by the Institute for Learning and Research Technology at the University of Bristol. They share a common framework of 4 sections, which clearly structure the learning experience. Users can choose to follow the whole tutorial sequentially or select the section most suited to their individual needs.

- **Tour** – The first section entitled TOUR provides a guided tour of key Internet resources for the subject area. This highlights the range of materials available and directs users to the most important sites. For example, the Internet for Lawyers includes references to primary legal materials (legislation, treaties, law reports and judgements); secondary resources (journal articles, case commentaries and textbooks); Finding tools (indexes to legislation, library catalogues and directories); organisational homepages (professional bodies, law firms, government departments and law departments in universities); statistical data and teaching materials (lecture notes and syllabi). Provision has been made for updating these entries to take account of changes in URLs and other alterations in content.

- **Discover** – The second DISCOVER section introduces the user to techniques for effective Internet searching. It includes a comparison of the strengths and weaknesses of commercial search engines and information gateways with guidance on when it is most appropriate to use each. This section also has a particular aim in helping students to use the RDN hubs effectively. For instance the Internet Politician provides examples of how to use

the advanced search form on SOSIG to truncate search terms and restrict searches to particular resource types.

- **Review** - the third section is entitled REVIEW. This teaches skills for critically evaluating the quality of Internet sites. This is an area of particular importance as the lack of quality control on the Internet means that users must be careful to assess the value and authenticity of sources before they use them in their work. The tutorials use case study scenarios to highlight common pitfalls and offer tips on how to begin to assess quality. The process is broken down into a series of simple questions which students can ask relating to Who? Where? And Why? the resource was placed on the Internet. You might want to take a look at the Internet Sociologist⁹ for an entertaining and effective example. This uses a site called 'Kill the Television' to discuss issues relating to bias on the Internet. It provides guidance to users on how they might check the authenticity of an author and look for more information on his/her motives in placing a resource on the Internet.

- **Reflect** – The final REFLECT section summarises the skills taught in the tutorial and provides case studies of how students, researchers and lecturers might incorporate usage of the Internet into their working practices. A good example is provided in the Internet Aviator¹⁰ where the undergraduate scenario tells the story of Ryan Ayre who is looking for material about the military usages of unmanned aircraft for his essay. It takes him through the stages of research, showing how he can use the Internet to find video footage, technical reports and relevant news items on the Internet. The tone is light hearted but it does communicate useful lessons about the range of material that can be found on the Internet and guidance on items which are currently available in paper only.

- **Links Basket** - Another notable feature of the tutorials is the links basket. As they move through the tutorials users can collect useful URLs in their 'shopping basket'. At the end they can pick these up and save them as a series of useable bookmarks.

- **Quizzes and practical exercises** also lighten the learning experience and offer students the chance to test their understanding of the material. Each section contains a selection of optional multiple choice, fill the gaps or more open ended questions.

- **Additional Features** – These are geared towards student needs and include a glossary of commonly used Internet terms and guides to citing Internet resources in essays.

- **Resources for Teachers** - The second phase of the tutorials introduced a supporting "Resources for

Teachers" section. This includes an introductory Powerpoint presentation, student workbook and handout and lesson plans. Teachers can use the "Print/Download" option to print out or download the whole tutorial or specific chapters within it. These can then be used as slides or handouts. Free posters may also be printed from the site.

How is the Virtual Training Suite being used?

The first independent academic evaluation of the usage and value of the Virtual Training Suite was completed by Lin Amber of the University of Bristol Information Services in March 2001.¹¹ This provides both quantitative and qualitative data on initial usage.

In terms of qualitative statistics, initial usage has been encouragingly high. From March-December 2000 there were over 43,000 log ins to the site, with an average of 204 sessions per day. Interest in the future development of the project remained high as over 2,000 people signed up to receive notification of the launch of the second phase of tutorials. This means that usage is likely to rise further in the future. One of the most popular options was to download the tutorial (739 sessions recorded) and to print off posters (1473 requests). These trends were noted by the project organisers and as a result these features were incorporated into the second phase of the project and advertised more widely.

Analysis was also made from a total of 122 online feedback forms completed between December 2000 and March 2001. Although the number of respondents only represents a small percentage of the total number of users, it does provide some interesting information on the type of users of the tutorials and their opinions of the content. 25% of the users were librarians seeking material for inclusion in user education sessions, 14% lecturers, 11% undergraduates, 8% researchers, 10% post graduates. The rest fell into other categories such as school students. 56% of users classified themselves as independent learners. This shows that the tutorials are reaching a wide audience, representing all the categories of user for which they were intended. The majority of the respondents felt that they had learnt something from using the materials. They were seen to be particularly useful starting point for novices. The most common problems experienced related to functionality. These were often local problems linked to the type of browser used and response time. Opinions were also divided on tutorial length. As a result of this feedback the authors of the second stage tutorials were encouraged to adopt more concise styles of writing. Technical features needed to support the quizzes were revisited and streamlined.

Feedback remains an ongoing process. Users are encouraged to complete on-line forms with their comments and these have now been highlighted more prominently to encourage greater response.

Why is the Virtual Training Suite being used at the London School of Economics?

The paper will now conclude by offering some qualitative examples of why the tutorials are currently being used by Library staff at the London School of Economics (LSE).

The LSE is a renowned teaching and research institution for the social sciences with a student body of over 6,000, of whom 93% are studying for post-graduate degrees. There are currently over 800 part time students. Usage of the tutorials was particularly attractive to us for a number of reasons.

- **The wide subject coverage offered.** The 40 packages match a large number of the areas, which are taught and researched by School staff and students. Subject based material was regarded by the users as more relevant than general courses as there was a feeling that it saved time by taking them directly to what they needed to know and avoided 'irrelevant IT terminology'. The Virtual Training Suite also covers a number of subject areas, such as medicine, which have a marginal interest to LSE researchers. The paper based library collections do not cover these areas comprehensively so information about the most important Internet resources was welcome.
- **The flexibility of the packages.** Free Internet access made it possible for part time students and students on fieldwork placements who could not attend timetabled library training sessions to be offered some training. It also enabled large numbers of students to receive training, avoiding the problems of restrictions on numbers in training rooms.
- **The downloadable materials and posters.** These provided a readily-usable resource for preparing user education materials which was welcomed by library staff who were under pressure to provide more training for growing numbers of students.

How is the Virtual Training Suite being used by the London School of Economics Library?

The range and flexibility of the package means that it has been possible to actively incorporate it into the learning programme in a number of ways:

- **Large scale student inductions.** At the start of each academic year subject liaison librarians give presentations for new lecturers and students in particular academic departments. These are large in scale and often take place in lecture theatres seating over 100. They are intended as overviews to the services offered. Slides have been taken from the tutorials and incorporated into PowerPoint presentations to demonstrate the type of training courses the library offers.

• **Hands on workshops.** Liaison librarians regularly offer small workshops for research and masters students from their departments. These sessions provide hands on teaching for 10-15 individuals at a time. The tutorials have been incorporated into some of these as a useful resource for helping novice students to find out what is available on the Internet for their subject area and improving the efficiency of their Internet searching skills.

• **Drop in sessions.** In addition to targeted workshops. The library also offers regular drop in Internet training sessions of around 90 minutes throughout term time. These are open to all staff and students without booking. The trainer usually demonstrates search techniques and important sites and then the students are able to engage in hands on exercises. As part of these sessions students are encouraged to work through tutorials as well as notes and materials prepared by more general Internet courses such as the TONIC Netskills package.¹² Trainers have found that while students are working independently at their own pace they have been able to offer a supportive atmosphere, which encourages learning.

• **Training sessions for library staff.** All new information desk staff at the LSE receive training sessions on Internet skills so that they can assist users in finding information. There is also a regular ongoing programme of refresher training sessions to remind established staff of new services. The tutorials have been used effectively in these. Staff have been encouraged to explore the tutorials and to note key sites in the TOUR sections as these often contain specialist subject directories or gateways which are of value in providing starting points for research. They are particularly useful in directing staff who do not have a wide experience of the subject area.

• **Inclusion in handouts.** The library produces a number of guides for staff and students on electronic services. An example of these are quick reference guides for particular subjects which are intended to offer an overview of starting points for research in the subject area. They contain a list of the main classmarks for the subject area, lists of locations of important journals and information on key electronic resources such as CD-ROMs, databases and Internet sites. The Virtual Training Suite tutorials have been listed in the appropriate guides as a good starting point for beginning Internet research.

• **Links on the library Web pages.** As the Virtual Training Suite is intended as an independent learning package, links to it have been placed on the library training Web pages. This has encouraged us to begin a process of redeveloping the information that we offer there in order to provide more full-text, self-contained

training materials. The library is involved in a collaborative project with the Teaching and Learning Technology Project based in the academic section of the LSE. This aims to develop online materials to cater more effectively for distance and part time learners who cannot attend formal training sessions. The first stage of the project has been the development of a package to train users how to search the library catalogue effectively.¹³ We also aim to develop more information on local fee based Internet services. This will supplement the information contained within the Virtual Training Suite.

Future Developments and Maintenance

The second phase of the tutorials was launched on May 8th by Michael Wills, Parliamentary Under-Secretary of State for Education and Technology via a live link up between simultaneous launch events held at the six universities of the RDN hubs. Already users are asking if the suite will be expanded. They have pointed out gaps in subject coverage, such as Art and Design, Music and Archaeology and asked for courses in these areas. The project team has petitioned the funders to see if more money can be made available to expand coverage. They are currently awaiting a response from them. In the meantime any suggestions for new subjects to be covered are welcome, although no promises can be made at this stage. Decisions are likely to be based on the response by users to the resource now that the full compliment of tutorials has gone live.

The other main query about the Virtual Training Suite is how it will be kept up to date. This is clearly an important issue where Internet resources are concerned. As a result the resource has been firmly embedded into the organisational structure of its parent service. The tutorials are all hosted by the relevant RDN hub, so for example all the social science tutorials are hosted by SOSIG (the Social Science Information Gateway). The hubs will be responsible for the upkeep of their set of tutorials by maintaining regular link checking procedures. Tutorial authors may also suggest edits to take account of new developments.

Ultimately we hope that word will spread about this new educational resource, and that it will enhance people's experience of using the Internet as a source of information, raising the skills level of academics and students nationwide.

Footnotes

¹ The Virtual Training Suite is located at: <http://www.vts.rdn.ac.uk/>

² Further information on JISC is located at: <http://www.jisc.ac.uk/>

³ HEFCE homepage is located at <http://www.hefce.ac.uk/>

⁴ Further information can be found at: <http://www.ilrt.bris.ac.uk/>

⁵ The first eleven tutorials were: Internet Medic, Internet Lawyer, Internet Politician, Internet Psychologist, Internet Social Worker, Internet Sociologist, Internet Economist, Internet Manager, Internet for History, Internet for English, Internet Aviator.

⁶ Social Sciences

Internet Anthropologist
Internet for Development
Internet for Education
Internet Geographer
Internet for Government
Internet for Social Policy
Internet for Social Research Methods
Internet for Social Statistics
Internet for Women's Studies
Reference

Internet Instructor

Humanities

Internet for History and Philosophy of Science
Internet for Modern Languages

Internet Philosopher

Internet for Religious Studies

Internet Theologian

Health and Life Sciences

Internet for Agriculture, Food and Forestry

Internet Bioresearcher

Internet for Nature

Internet Vet

Physical Sciences

Internet Chemist

Internet Earth Scientist

Internet Physicist

Engineering and Mathematics

Internet Civil Engineer

Internet Electrical Engineer

Internet for Health and Safety

Internet Materials Engineer

Internet Mathematician

Internet Mechanical Engineer

Internet Offshore Engineer

⁷ The RDN homepages are located at: <http://www.rdn.ac.uk/>

⁸ Further information on this can be obtained from: <http://www.webecon.bris.ac.uk/calnet/>

⁹ See <http://www.sosig.ac.uk/vts/sociologist/index.htm>

¹⁰ See <http://www.eevl.ac.uk/vts/aviator/index.htm>

¹¹ The full text can be viewed online from the Virtual

Training Suite Pages <http://www.vts.rdn.ac.uk/>

¹² For further information on TONIC see <http://www.netskills.ac.uk/TonicNG/cgi/sesame?tng>

¹³ See <http://www.library.lse.ac.uk/infoskills/catalogue/>

* Paper presented at the IASSIST/IFDO Conference 2001, Amsterdam. Heather Dawson, British Library of Political and Economic Science, h.dawson@lse.ac.uk. With the assistance of Debra Hiom, Institute for Learning and Research Technology, University of Bristol, d.hiom@bristol.ac.uk and Emma Place, Institute for Learning and Research Technology, University of Bristol, emma.place@bristol.ac.uk