Using the Moodle VLE in primary and secondary schools in Buckinghamshire

IAN USHER

The 240 local authority schools in Buckinghamshire contain a diverse range of school communities including high achieving grammar schools, innovative upper schools as well as primary schools in urban and rural communities where the school roll may be as small as 40. This diversity is reflected in approaches to using ICT for learning, for example, some secondary schools have dedicated teams of ICT technicians who supply their school with an extranet, web-based email and in-school wikis and blogs. In comparison, others face problems of recruiting and retaining appropriately qualified support staff for such initiatives. The County-wide policy for devolvement of the maximum funding to schools precludes any strategy for aggregating funding such as eLearning Credits[1] or other Standards Fund money and, despite the presence of recommendations on the use of platforms, technologies and approaches to implementing the DfES's consultation document *Towards a Unified e-learning Strategy*[2] within the County policy on ICT, schools have yet to adopt any unified approach.

The Buckinghamshire Grid for Learning

Buckinghamshire has developed its own variant of the connectivity provided by the local Regional Broadband Consortium (RBC) through the South East Grid for Learning. This uses the existing County Wan infrastructure but incorporates core services from Atomwide[3] who provide 'unified sign on', filtering, web hosting / email and video conferencing facilities. Schools buy in to the managed service with primary schools receiving a 2Mbps connection and secondary schools

Homepage of the moodle.org website

10Mbps. The network design provides an opportunity to take a common approach to a number of systems, such as email provision, learning environments and transfer of pupil information through school ICT systems.

Online Learning Environments offered to schools

Any UK school keen to explore online learning will receive numerous glossy mailings of how a particular Virtual Learning Environment (VLE) has transformed learning in a specific school case study. "Transformational", "personalised" and "engaging" pepper such documents with offers of "delivering

personalised learning" to schools. Such commercial systems are usually sold to schools on a 'per-head' basis. For example, a typical cost for such a system might be £7 per head per annum which amounts to at least £7000 for a smaller secondary school. However, since no VLE is 'pedagogically neutral'[4] and if a school has not carefully considered the ways of working which a particular VLE allows, it may find that the learning tools do not suit the culture of learning and teaching within that school. In addition, only those with a high level of high level of ICT literacy may be able to engage with the VLE.

Open source learning environments

A 'typical' school will have a Microsoft Windows network which has usually been implemented by one of the major ICT suppliers. Moodle (originally an acronym for Modular Object-Oriented Dynamic Learning Environment) is an Open Source Learning Environment. It is based on PHP and MySQL and can run on Linux, Unix, Windows, Mac OS X, a Knoppix[5] CD or even a USB memory stick. Created by Martin Dougiamas and based on a social constructivist philosophy[6], Moodle has been evolv-

FEATURE

ing since 1999. Currently there are over 2300 Moodle-based sites registered on **www.moodle. org**[7]; however, in compulsory UK education the number of sites is considerably smaller. In Buckinghamshire, with no central purchasing power to 'bulk buy' a VLE for schools, we have opted to explore the potential of Moodle through a pilot project.

Exploring Moodle through a pilot project

It is important for schools to see a local authority 'taking its own medicine' before accepting any sort of prescription themselves. In addition, the experience of administering, developing and using a VLE is invaluable in gaining experience which can be shared with schools. Therefore, the Buckinghamshire Grid for Learning[8] (BucksGfL) uses a central installation of Moodle to deliver resources to support school improvement. In this case Moodle is being used as a Content Management System and, although not explicitly designed for this, the software performs well. The skill level required to maintain resources is pitched as "basic skills in MS Word coupled with the ability to add an attachment to a Hotmail message."

The pilot will initially involve a dozen schools: two grammars, five uppers and a mixture of five primaries. A mixture of staff from the schools including headteachers, deputies, ICT co-ordinators, subject co-ordinators and administrative staff are involved as 'students' in a 'course' delivered on the central BucksGfL. This course introduces the use of Moodle modules such as Forums, Choices, Wikis, Assignments, online Quizzes, collaboratively edited Glossaries and other activities in order that the school staff can experience the learning environment as a student. At the start of the project, suggested areas to be explored included: creating quizzes to simulate the forthcoming on-screen test for ICT at Key Stage 3[9]; collaborative story writing for pupils at primary level and opening up secondary schools' VLEs to Year 6 pupils so could they physically and virtually visit their future school and see, for example, how the school uses online learning for homework.

There are a number of commercial learning environments used by schools in Buckinghamshire. Before other schools commit to a similar journey, the aim of our project is minimise the outlay in terms of funding and resources on exploring what is still new and unexplored territory for many in this sector. If some of the schools reach the end of the pilot and can make an informed decision that, for whatever reason, they are not in a position to tackle online learning at the moment, it will have occurred without costing the school a significant amount of money. In the same way a school which, through the pilot project, sees the opportunities for using online learning could

Implementation of Moodle at www.bucksgfl.org.uk/

spend money on a commercial VLE or invest further time in using Moodle knowing that their school is genuinely ready to use it appropriately.

The future's bright

Early work within the authority and with the pilot schools has proved encouraging and the schools are keen to use Moodle's tools to begin to explore and map out what for many of them is uncharted territory. No system is perfect but we believe that the chance to test the waters of online learning offered by the flexibility of Moodle holds great potential for the appropriate use of this area of learning technology in the learning experience of Buckinghamshire pupils and staff.

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References

[1] Curriculum Online - What are eLCs?
www.curriculumonline.gov.uk/AboutELCs

[2] DfES E-Learning Strategy **www.dfes.gov.uk/elearningstrategy**

[3] **www.atomwide.com**

[4] Dunn, Sara (2003) Return to SENDA? Implementing accessibility for disabled students in virtual learning environments in UK further and higher education
www.saradunn.net/VLEreport/section06.html

[5] OSS Watch Knoppix CD containing 'run from CD' Open Source software
www.oss-watch.ac.uk/resources/osswatchknoppix.xml

[6] **moodle.org/doc/?file=philosophy.html**

[7] **moodle.org/sites**

[8] **www.bucksgfl.org.uk/resources**

[9] QCA - On-screen test for ICT at key stage 3
www.qca.org.uk/7280.html

Seb's review

Seb Schmoller

ALT-C 2005. The full ALT-C 2005 web site went live at the end of November, and we opened the site for the submission of papers and abstracts as planned on 10 December. The closing date for submitting Research Papers is Monday 14 February 2005. The closing date for submitting Abstracts of short papers, symposia, workshops, demonstrations and posters is Monday 28 February 2005. We will announce the names of the ALT-C 2005 major sponsors at the end of January 2005.

Web development services tender. As reported in ALT-N 47, we have tendered for organisations to supply ALT with web development services, so that we have appropriately skilled, and openly selected developers on call for work on the ALT web site over the next couple of years. The successful bidders for this work were Futurate Limited and Knowledge Integration Limited. During 2005 we will tender for a third organisation to be on our supply-list.

Responses to consultations. During December we responded to Ufi's consultation on its 2005-2010 Strategic Plan, and during January 2005 we will be responding to the Higher Education Academy's consultation on its 2005-2010 plan.

ALT Learning Technology Research Policy. I reported in ALT-N 47 that we would issue this by the end of 2004. I spoke to soon. We now hope to issue it by spring 2005.

CMALT. We intend to launch the ALT Certified Membership scheme (CMALT) during April or May 2005. From the ALT home page you can join a low volume e-mail list through which we will keep subscribers informed of progress.

Membership categories and entitlements. ALT's membership categories - Individual, Institutional (FE and HE), and Corporate (Small and Large) - have been in operation for several years, with subscription rates based on these categories. In October 2005 ALT's Central Executive decided that a review is due. A short-life working party has been set up, led by John Cook, who is Chair of the Association. Its remit is to "review ALT's organisational membership categories, structure, entitlements, and fees, and to make recommendations to ALT on revisions". We will announce any changes in ALT-N 49.

Research Assessment Exercise 2008. I reported in ALT-N 47 that we had nominated two individuals to be members of the Education sub-panel, and one to be a member of the Art and Design sub-panel. Sub-panel membership was to have been announced by the end of 2004. HEFCE had intended to publish this information before the end of the year, but encountered some delays. It now envisages publishing Sub-panel membership early in 2005.

Seb Schmoller *sschmoller@brookes.ac.uk*

Director's corner

ALT-C 2005: submit your proposals now

Please help us to spread the word by circulating a brief email message to colleagues – contact Hayley Willis for a copy (**h.willis@brookes.ac.uk**). Registration for presenters will close on 30 June (on the earlybird registration deadline) and final registrations close on 12 August.

ALT-C 2004 archive

If you'd like some ideas of what previous presenters have covered you can read abstracts and download presentations from the ALT-C 2004 web site at **www.alt.ac.uk/altc2004/timetable/timetable.php**. You can also order copies of the ALT-C 2004 Abstracts and the Research Proceedings from the ALT office (see web site updates below).

ALT-N to go online

An important development for 2005 will be a new version of ALT-N published in html format. We plan to keep a shorter version of ALT-N in print form for distribution in the normal way, but publish longer articles, case studies, etc, in the online version. If you have any queries about this, please contact the Editor, Susi Peacock (**speacock@qmuc.ac.uk**) or myself.

Deputy editor vacancies

Two deputy editors are sought to assist the Editor with commissioning and editing articles for ALT-N. Deadline for applications is 28 January. For more details go to **www.alt.ac.uk**

Web site updates

We have been making many changes to the ALT site recently. There is now a new order form for publications, where you can order copies of all ALT publications in print (note the discounts for multiple copies), and find links to publications that have been published jointly with other organisations. The Events pages have also been updated and will shortly include online booking for all events. Go to **www.alt.ac.uk**

Fortnightly email digest

The ALT digest has been distributed to members for over three years now. Collating and editing items and putting them into text format for maximum portability takes around 3 to 4 hours every fortnight. Are you receiving it (or does your spam filter assign it to the junk mail bin)? Please continue to send your job adverts, conference announcements, etc, to **alt@brookes.ac.uk** in text format (no attachments, please, and no pdf files) and contact us if you are not receiving the fortnightly message.

Joe Homan Charity support

The New Year has opened on a sad note after the tsunami disaster in Asia. The Joe Homan Charity (**www.joe-homan.org**), which we have supported through ALT-C 2004 and 2005, has not been affected as their facilities are around the inland area of Tamil Nadu, but it is likely they will be helping with the relief effort on the coast. News of the child we are sponsoring will be sent to us later this year.

Rhonda Riachi *rriachi@brookes.ac.uk*

ALT-i: the ALT Knowledge-Base

<div align="right">JOHN COOK</div>

ALT operates in a dynamic environment and we are responding effectively on various fronts (e.g. accreditation, organising the annual conference, bringing in FE and corporate members, policy, research). We certainly have the ALT full-time staff and our army of committee members to thank for this happy state of affairs. However, we need to examine issues related to how we meet the needs of our membership by working towards fulfilment of our strategy for time period 2004-2007 (the strategy is on the ALT home page: **www.alt.ac.uk**). The ALT Central Executive meeting of 18 October 2004 agreed in principle the ALT-i proposal tabled and asked that the proposal be taken forward.

So what is ALT-i? The 'i' stands for integration or intelligence. The intention is to develop a 'joined up' resource, or ALT knowledge-base, that: facilitates the integration of ALT Committees; standardises our approach to capturing ALT's organisational memory; makes intelligence from external bodies available for incorporation into our own work and most importantly provides a membership service that is based on these interlinked resources and meets the differing needs of different membership categories.

Sounds like a tall order? Not at all; ALT will be leading the way by providing an integrated, 'must have' service for our growing number of members. At the Central Executive meeting we noted that the new environment in which ALT now operates has the Higher Education Academy and the JISC working towards a strategic alliance with HEFCE. Thinking of the e-learning strategy from the DfES (**www. dfes.gov.uk/elearningstrategy**) a key question for some of our members is: 'What is ALT doing to help further and higher education institutions develop their own strategies for embedding e-learning?' ALT-i should be there as a resource to help ALT Committees and ALT members formulate and share answers to such questions.

The ALT membership includes corporate, institutional and individual members, so a lot of thought is going into the design of our system. If you would like to comment on this proposal, email me with your thoughts at **john.cook@londonmet.ac.uk**.

John Cook, Chair of ALT Central Executive
john.cook@londonmet.ac.uk.

John Cook, Chair of ALT, presents a research paper prize to Linda Creanor and Steve Walker at ALT-C 2004. Their paper presentation, Learning architectures and the negotiation of meaning in European trade unions, can be downloaded from **www.alt.ac.uk/altc2004/timetable/abstract. php?abstract_id=54**

CELTIC WEBCT USERS GROUP

The inaugural meeting of this Group, aimed at staff supporting WebCT in Scotland, Northern Ireland and Ireland, was held in Edinburgh in late November 2004. Steve Clark from Birmingham University provided us with a lively and highly informative discussion about their current and future deployment of WebCT. We then discussed the aims of and the future events for the Group using an electronic voting system, which was organised by Noga Mogey.

A second event will be held at Reid Kerr College on 25th February, 2005 where we will discuss WebCT 6. Reid Kerr will also be giving a presentation about their implementation of WebCT and a model for developing online materials. For further information about the Group and its events, see **www.celticwebct.org.uk.**

<div align="right">**Susi Peacock**</div>

Survey Data in Teaching Project (SDiT): enhancing critical thinking and data numeracy

Louise Corti

The SDiT project, funded under the Exchange for Learning (X4L) Programme, explored strategies, methods, tools and metadata standards which enable the repurposing of e-learning materials. It used existing data resources, supported by ESRC and the JISC for teaching and learning, with the aim of increasing their use within the further education sector. Pedagogical outcomes were at the heart of the Programme, with a focus on learning activities and outcomes, as well as the development of strategies that will encourage sustainability and widespread adoption of e-learning materials.

Re-purposing in the case of this project meant re-packaging complex data with educational narratives and exercises into discrete 'chunks'. Ready-made learning objects or modules can be tried and tested by tutors and incorporated into their teaching in a flexible way. The projects deliverables included: the creation of new and easily accessible datasets; accompanying light-weight substantive learning materials; an intuitive and flexible means of delivering these materials; high quality and standardised descriptions of the resources; and an evaluation and awareness raising strategy.

The teaching and learning resources created

X4L SDiT shows how existing data sources can be utilised to answer questions about crime. Crime, taught across the curriculum, is relevant to a range of social science disciplines as well as areas such as public service GNVQ, media and citizenship studies. The resources are appropriate for 'A' level syllabi but are also highly applicable for undergraduate and postgraduate learning. The outputs created are a variety of free teaching and learning resources relating to social science and statistics, based on learning strategies that encourage the teaching of research methods within a substantive context.

Three types of resources were developed: four learning modules on the use of crime data with data exploration exercises and quizzes built in; two appendices on sampling and statistical inference; a glossary of statistical terms, and two resource discovery guides, one on the use of the Nesstar online data exploration system, and another on how to find data and documentation (resource discovery) in the UK Data Archive.

Modules were designed to be used as part of standard classroom teaching or as additional/self-paced learning activities and were created in a number of formats to suit different pedagogical needs:

- On-line, interactive self-paced modules hosted (long term) at the UK Data Archive web site
- Printable and reproducible hard copies:
  > bound paper workbook with accompanying CD-ROM
  > Microsoft Word files
  > Adobe PDF files
  > Microsoft PowerPoint presentations which can be used to provide slides or handouts

Home page for X4L SDiT Resource: Investigating crime using the British Crime Survey

Comparing trends in crime in the UK, 1981-2003, using different data sources

Exploring reasons for perceptions of crime rates using survey data

The project also created:

*   A teaching version of the British Crime Survey dataset available in multiple formats (SPSS, STATA, NSDStat and tab delimited (suitable for MS Excel) and available from three systems:

    > via the freely available online browsing system, Nesstar;
    > via the UKDA download/ordering system;
    > via the X4L project website or SDiT CD-ROM.

*   Free demonstration version of very simple and user-friendly data analysis software, which is utilised in the last two of the teaching modules were created, NSDStat.

For promotional purposes, the resources listed above comprising the modules, guides, data and data analysis software, have been printed and bound as an SDiT Resources Pack, with an accompanying CD-ROM.

There is also a Tutor Guide with model answers and suggestions for classroom exercises, ways of using data resources in teaching and a mapping of the resources to Key Skills levels 3 and 4, that is, appropriate to 'A' level. Finally, case studies of using the SdiT resources, based on feedback and usage of the resources in the classroom by tutors and students are included.

> The HE and FE staff and students and information professionals who helped advise on and evaluate the project considered the learning materials and associated guides created by the project to be impressive and highly useful.

Constructing a simple tabulation: tabloid paper readership

Experiences of re-purposing

The modules for higher and further education were authored and piloted primarily by lecturers who are, or have been, responsible for teaching quantitative skills in social science. The main lesson learnt from the project was that drafting such resources takes up huge resources (time for coordinat-

ing, authoring, evaluating, rewriting mounting on web and so on), particularly if they are to be relevant, appealing, flexible, light-weight, 'discrete' rather than courseware, and suitable for web-based delivery.

The HE and FE staff and students and information professionals who helped advise on and evaluate the project considered the learning materials and associated guides created by the project to be impressive and highly useful. Moreover, they felt that the project had delivered a neat and flexible model that both answered the data literacy challenge and demonstrated the concept of repurposing. Pre-prepared materials can save tutors considerable time and effort. The mapping of modules and resources to syllabi and Key Skills (levels 3 and 4) was attractive to FE tutors. In this way it would be easier to quickly identify appropriate materials from learning banks or repositories (such as the JORUM) for use in their own teaching.

It is clear from this small scale project that embedding strategies are required to ensure the JISC resources are used on a widespread and taken-for-granted basis. There is a need to reach out to tutors as well as Information and Learning Technology staff within educational institutions. This requires promotion and encouragement from organisations and policy makers in the fields of education and ILT, like JISC, BECTA, LSC, and the DfES, to help utilise the JISC resources and programme outputs like the X4L, and to join up the many disparate e-learning initiatives. Furthermore, partnership and collaboration of the JISC Service Providers, like ESDS, with tutors to undertake focused projects based on data resources with specific outcomes (e.g. by topic area matched to syllabus) would be beneficial. Our desire would be to see the use of such resources to help build up data literacy and data handling skills amongst students, from school age and upwards.

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References

Economic and Social Data Service (ESDS) web site **www.esds.ac.uk/**

JISC Exchange for Learning (X4L) Programme
www.jisc.ac.uk/index.cfm?name=programme_x4l

NESSTAR **http://nesstar.esds.ac.uk/webview/**
The UKDA's online survey data browsing and download system

SDiT Website **http://x4l.data-archive.ac.uk/**
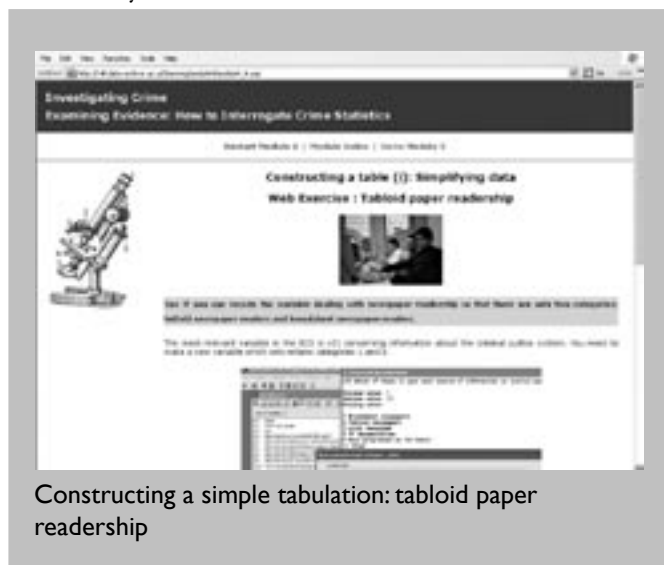
Ground-breaking project - flexible learning for industry

BARRY POOLE

Limited take up of modern apprenticeships, acute skills shortages and a 'soon to retire' workforce are just some of the reasons why manufacturing and engineering companies are concentrating on developing the skills of their existing staff. However, access to courses which provide mandatory qualifications for technicians, supervisors and technical managers such as the BTEC National Certificate is severely restricted because educational providers demand at least a 'day release' attendance pattern. Unfortunately, a high proportion of employed adults work for small companies and cannot be 'spared' by their employers. Furthermore, the prevalence of shift work in these sectors restricts the opportunity for individuals to attend 'fixed pattern' courses.

In response to this, the Manufacturing Centre of Vocational Excellence (CoVE) at North Devon College is leading three partner colleges across Devon in an Engineering E-learning project. The delivery phase (and continued learning material development) is being funded by a Learning and Skills Council (LSC) co-financing project and is therefore aimed at Small to Medium Enterprises (SME's). From January 2005, employed adults in Devon will be able to enrol with one of the partner colleges and access units of the BTEC National Award in Engineering remotely through a Virtual Learning Environment (VLE).

Engineering E-learning in action using a Virtual Instrument Platform

Whilst remote access to learning materials is not a new concept, there are two ground-breaking features of this approach:

- Learners on the Electrical and Electronic Principles (EEP) or the Electronics unit will be loaned a 'Virtual Instrument Platform'. This high tech learning apparatus connects to a PC and enables the practical electrical and electronic elements of the units to be completed (see photo).

- Submitted work is assessed largely automatically within the capability of the VLE. Teaching and assessment material has been designed to meet the specifications of each BTEC unit and the evidence produced will be in a form which meets the requirements of BTEC's internal and external verification procedures.

A learning profile is set up on the VLE for each student and their progress will be monitored by subject specialist tutors. Sufficient tutor time will be allocated to each learner to ensure regular contact through the features of the VLE or by phone. Extra support will be provided as required, including the option to attend a centre, where a particular learning difficulty is identified.

> It would be thrilling if this could herald the beginning of widespread change in flexible vocational provision for industry. We would particularly like to hear from those involved with similar initiatives in the United Kingdom.

It was evident from the development research stage that engineering has not generally been the early focus for learning material production, for example, through the National Learning Network. Nevertheless, there is still a massive amount of material in circulation and the challenge has been of matching existing materials to each BTEC unit specification. Unfortunately, in most cases it has been more efficient to create material from scratch!

Despite the significant challenges faced by the Project Team, this ground-breaking approach is 'on track'. It would be thrilling if this could herald the beginning of widespread change in flexible vocational provision for industry. We would particularly like to hear from those involved with similar initiatives in the United Kingdom.

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EVENTS

ALT WORKSHOPS

Moodle II: Groups, Wikis and Quizzes. Exploring the advanced tools within Moodle

King's College, London (Waterloo campus)

16 February 2005

£85 (ALT members) £150 (non-members)

The aim of this workshop is to introduce participants to the advanced features of Moodle, an open source virtual learning environment developed by Martin Dougiamas in Australia. The workshop will explore many of the unique and advanced features of the Moodle environment and give participants the opportunity to Moodle from a student and teaching perspective. Please note this workshop is not suitable for beginners.

Presenters: Sonja Grussendorf and Dr Mira Vogel, Goldsmiths College, London

Booking deadline: 2 February 2005

M-Learning: Taking education into the community?

York University (tbc)

14 April 2005

£95 (ALT members) £150 (non-members)

The workshop will take an introductory look at several Mobile Technologies and will explore and demonstrate their use. We will discuss the use of PDAs in registration and in class work (e.g. teaching Early Years and Childcare NVQs); the use of Presentation software; how 'office' software can be used and how some mobile devices can connect to the Internet. We will discuss how text messaging is being used within the sector and use Gyro-Suite keyboards and mice.

Presenters: David Sugden, Dewsbury College, and John Whalley, East Riding College.

Booking deadline: 31 March 2005

IT won't work here! An ALT / JISCinfoNET / JISC Development workshop

Orange Studio, Birmingham

24 February 2005

Cost: £70

This workshop will explore the cultural issues involved in connecting learners and institutions, and how to overcome traditional barriers to progress with e-learning. Think-tank sessions will discuss practical solutions to problems. Participants are encouraged to forward issues for the panel and thinktank sessions to address during the discussions.

There will be a debate on the theme "Joining up learning across organisations is for the benefit of the institutions/government and not for the learner".

Presenters include:
Paul Bailey (JISC Development)
Chris Cobb (LSE)
Sal Cooke (TechDis)
Gill Ferrell (JISCinfoNet)
Doug Gowan (Open Learning Partnership)
Rhonda Riachi (ALT)
Bob Sharpe (University of Plymouth)
Mark Stiles (University of Staffordshire)
Tony Toole (Coleg Sir Gar)

Booking deadline: 10 February 2005

For booking forms and more information please visit
www.alt.ac.uk/workshops.php
or email **alt@brookes.ac.uk**

ALT CONFERENCES

ALT Spring Conference 2005

Reflective practice, future thinking

Conference 31 March
Research Seminar 1 April

Dublin, Ireland

In association with the Irish Learning Technologies Association (**www.ilta.net**) and SURF (**www.surf.nl**), and sponsored by the JISC (**www.jisc.ac.uk**). The conference will cover developments in digital repositories, e-portfolios, and ubiquitous computing. Places will be strictly limited.

Booking deadline: 17 March 2005

www.alt.ac.uk/conferences.php

ALT-C 2005

Exploring the frontiers of e-learning

6-8 September 2005

Manchester, England

Second call for papers

Key deadlines
Research papers close: 14 February 2005
Other submissions close: 28 February 2005
Earlybird registration closes: 30 June 2005

www.alt.ac.uk/altc2005