This booklet has been authored jointly by the Learning and Teaching Unit (LTU) and the Learning Technology Team (LTT) to provide staff with some basic information and ideas about how to use the learning technologies that are currently available and supported.

Because e-learning straddles different areas of interest and expertise, responsibility at the University is shared between the LTU and the LTT: the expertise of the LTU lies mostly on the pedagogical side, while the expertise of the LTT is more on the technical side. For example, if you were interested in supplementing your lectures with online assessments, the LTT could train you to use the relevant software, while the LTU could advise you on how to embed the assessments in the curriculum, and give examples of how other departments are using online testing.

However, although this model of shared support is the best way to draw on the expertise available, we appreciate that it may be confusing for colleagues who are interested in e-learning. One of the aims of this booklet is to bring these two areas more closely together, and to make explicit who best to contact in order to get the right kind of support.

The booklet is also intended to publicise, and encourage the submission of, examples of good practice relating to e-learning across campus, which can be accessed via the Good Practice Database (URL opposite).
Increasingly, students expect to see technology used where appropriate. New technologies offer consumers a personalised product. From MP4 players to social networking sites such as mySpace and Facebook, what successful technologies have in common is the flexibility they allow users to personalise them. At university, students look for the same level of personalisation in their learning experience; the expectations are perhaps even higher at a relatively small, mostly campus-based university like Essex.

This booklet provides basic information on all of the technologies that are currently supported centrally at the University, including examples of how the technology has been used effectively elsewhere, the benefits for both staff and students, and a ‘hints’ box which, in a single sentence, suggests a technology in relation to a specific need or problem.

‘Intelligent use’ should be the working philosophy of anyone exploring e-learning. To ensure that this philosophy becomes reality, expertise is available at Essex which covers all aspects of its application, in addition to which the Good Practice Database contains examples of effective e-learning across campus (see the URL below).

We strongly encourage you to make the most of the e-learning opportunities available at Essex.

Richard Murphy, Director of Information Systems Services (ISS), May 2008.

For examples of how learning technologies are already being used around campus, visit the Good Practice Database:

www.essex.ac.uk/goodpractice
Moodle

What is it?
Moodle is a Virtual Learning Environment (VLE) that enables teachers to create online resources, either to support existing courses or to facilitate distance learning. It offers a variety of course tools and communication features, including resources and activities such as discussion forums, chat facilities, quizzes, surveys, glossaries, etc.

What does it offer?
Moodle is based on the social constructivist model of learning which emphasises the construction of understanding and learning through interaction with others. It achieves this by offering a range of tasks that focus on group work, collaboration, communication, sharing, activities, and reflection. However, although Moodle is founded on this approach, it is also a very flexible tool which can support a wide range of teaching approaches and methodologies.

How you can use Moodle...

- **To deliver your learning material** - you can present material in various formats, including text and multimedia, lecture notes or slides, additional exercises, past exam papers, etc;

- **To communicate with your students** - you can exchange messages with your students in "real time" (synchronous) using the chat facility or "any time" (asynchronous) using forums. Forums are particularly useful for encouraging online discussions;

- **To deliver online quizzes and surveys** - you can run multiple-choice or short-answer tests that provide instant feedback to students, or you can conduct evaluation surveys that elicit student feedback about their learning;

- **To encourage collaboration** - you can encourage teamwork and peer support by setting up small groups of students within a course or for a particular tool; for example, allowing groups of students to contribute to a collaborative glossary, or using a wiki (an online space that allows users to edit content collectively) for writing group lecture notes;

- **To monitor student use and progress** - you can monitor your students’ access to the online course and track their activity;

- **To distribute information about your course** - such as: course guide, timetables, assessment information.

“Moodle makes me feel that I’m connected to students without huge queues outside my office every week. It allows me to communicate with them in a more informal way that injects some fun and creativity back into the learning experience and the lecturer-student relationship.” – Kat Riach, Lecturer, AFM

**Hint:** If you want to create a web-based component to one of your modules that provides your students with learning resources and opportunities to communicate and collaborate, then Moodle is the learning technology we would recommend.
QuestionMark Perception

What is it?

QuestionMark Perception (QMP) is a web-based application that enables staff to create online assessments, tests, and surveys. The Department of Biological Sciences has been pioneering its use for a number of years and both Accounting, Finance, and Management and Computing and Electronic Systems have used it extensively. More recently, it has been used in the Faculty of Humanities and Comparative Studies by the Department of History.

What does it offer?

QMP includes authoring software, a server to deliver formative and summative assessments over the web, and reporting tools to help you analyse assessment and survey results. Many different question types are available, including multiple-choice, multiple-response, fill-in-the-blank, essay questions, hotspot, drag and drop, word response (text match), numeric questions, matching/ranking (selection question), matrix, and explanation screens.

What are the benefits to students?

- You can provide students with immediate feedback, enabling them to identify gaps in their knowledge and understanding;
- Formative assessments are a useful revision tool, enabling students to revisit course content and assess their comprehension;
- Online assessments enable flexible and personalised delivery.

What are the benefits to teaching staff?

- You can analyse results online and monitor student performance quickly and easily;
- You can easily identify effective/ineffective questions;
- You can re-use banks of questions and automatically randomise questions for re-testing;
- You can devise tests at different levels of difficulty to which students are automatically referred;
- You can use questions to diagnose problems and target assessments at a specific level of difficulty;
- No marking!

Hint: If you want to run sophisticated online formative or summative assessments, then QuestionMark Perception is the learning technology we would recommend.
myLife and SharePoint

What is it?

myLife is the University's ePortfolio system to support Personal Development Planning (PDP) as well as a range of other activities. It is hosted in Microsoft SharePoint, which also has enormous potential, especially for use by staff.

The myLife ePortfolio provides students with a personal web-space with optional activities and tasks to help them reflect on, record, and plan their academic, career, and personal development.

SharePoint – of which myLife is just one element – is a central resource that can be used by staff, both for their own personal/professional development (everyone with an Essex login has personal web-space, including all staff), but also to create 'shared workspaces' where groups of people can 'check in' and 'check out' documents for joint work.

What does myLife offer?

In addition to helping students engage in PDP and take a more considered approach to their study and career development, myLife can support a wide range of other activities. Students can create workspaces to prepare academic work and facilitate group work; they can also use it as a social networking site, to keep track of their friends and life on campus.

myLife has been designed to support learning communities and to share information.

How has it been used?

The Centre for Psychoanalytic Studies has used myLife and SharePoint to develop a dynamic area for its community of research students who are rarely on campus and might otherwise feel isolated.

They use the area extensively: it keeps them in touch with the activities of the Centre through a research forum, a discussion board, and a regular newsletter. Students regularly upload draft papers for comment, while the discussion space allows students who might otherwise be unable to participate in the dissemination and evaluation of academic work to contribute their thoughts on the papers being presented.

Contact: For advice on PDP, contact Claire Revell (csrevell@essex.ac.uk); for technical advice, contact the Learning Technology Team (ltt@essex.ac.uk).

Hint: If you want your students to develop their ability to reflect and plan, then myLife is the learning technology we would recommend.
Personal Response Systems (PRS)

**What is it?**
Similar to ‘Ask the Audience’ from the television programme *Who Wants to be a Millionaire?*, PRS is a classroom technology that maximises student participation and enables tutors to interact with large numbers of students to check understanding and opinion.

**The process of using PRS**

1. Lecturer poses a question
2. Students answer the question using the keypad on their handsets
3. Responses are transmitted to the receiver
4. Results are displayed via a data projector

The software can also be used to aggregate the responses to produce a graphical representation of the results, which can be displayed via a data projector. The results can be discussed and the lecturer can then choose how to proceed with the next part of the lecture.

**What are the benefits to students?**
- The opportunity to consider/apply the material being presented improves depth of learning and retention;
- Option of anonymity encourages all students to participate;
- Immediate feedback on own understanding allows students to benchmark themselves against peers;
- Participation makes lectures more fun and interesting.

**What are the benefits to the lecturer?**
- You can quickly gauge the level of understanding in the audience;
- You can tailor your presentation to meet the unique needs of each audience;
- You can boost attendance for those potentially "dry" subjects;
- You can facilitate constructive discussion between students and between you and the students.

PRS has also been used for decision-making in meetings.

“There are a multitude of benefits to using PRS. Besides providing immediate feedback to students in lectures, we monitor their weekly progress and identify who is struggling; we then contact those students between classes, start up a dialogue between us and them, and help them to address their weaknesses.” – Caroline Angus, Lecturer, Biological Sciences.

**Contact:** For training in the use of PRS, please contact the Learning Technology Team (ltt@essex.ac.uk). For advice on the pedagogic use of PRS, please contact Nicola Billam, Learning and Teaching Officer (njbrya@essex.ac.uk). For loan of PRS equipment and support with hardware issues, please contact Audio Visual and Media Services, AVMS (avmserv@essex.ac.uk).
Online Coursework Submission (OCS)

The Online Coursework Submission system allows students to submit digital copies of assignments to their department via the internet. There are many benefits to using the OCS, including:

- Potential reduction in administrative overheads and reduction in paper wastage;
- Departments can stipulate that students ‘watermark’ their work and submit a hard copy. Watermarking involves the addition of a unique code to a PDF version of the uploaded coursework. The code allows the department to verify that the paper and electronic coursework submissions are identical and were watermarked at exactly the same time and date;
- The system can be used in conjunction with TurnitinUK (plagiarism detection software – see below);
- Students can practise submitting coursework to the OCS by using a ‘dummy’ course;
- When students are using it for the first time they are required to visit the Plagiarism webpages before they are able to submit work.

For more information visit: https://courses.essex.ac.uk/ocs

TurnitinUK

TurnitinUK is a browser-based plagiarism detection system which compares submitted work against:

- A database of previously submitted material (i.e. other students’ essays and assignments);
- Over 12 billion webpages;
- Copyright-free material from the Gutenberg project;
- Selected subscription services.

An originality report is generated for each piece of submitted work, highlighting areas where the text matches any of the sources listed above; the system can also highlight possible incidences of collusion.

For more information visit: http://www.submit.ac.uk

Contact: If you are interested in using TurnitinUK or OCS, contact the Learning Technology Team (ltt@essex.ac.uk)

Hint: If you want your students to submit their coursework online, then the OCS is the learning technology we would recommend.
The Course Materials Repository (CMR) is an online service that allows teachers to publish course content on the web that is relevant to a specific course. There are many benefits to using the CMR, including:

■ Course materials may be hosted in an officially designated area, separate from personal material, non-course material, student home pages, etc (information can also be held about course materials that are hosted elsewhere, e.g. on a private web server);

■ Access to course materials can be restricted;

■ The CMR is searchable, both by the University’s main search engine and by a local, repository-only search option;

■ Course materials are visible via both the main CMR homepage, and also through a personalised version available to students using the myEssex portal;

■ Staff can publish their materials by either using a very simple ‘drag and drop’ process or using an HTML editor (such as FrontPage).

For more information visit: http://courses.essex.ac.uk/about/staff.aspx

**Centres for Excellence in Teaching and Learning (CETLs) – e-Learning**

There are a number of Centres for Excellence in Teaching and Learning (CETLs) that focus on e-learning. They can be contacted for expert advice and publications, and are sometimes available to run sessions (the Learning and Teaching Unit often advertises sessions with guest presenters from CETLs, so look out for forthcoming events):

■ **The Blended Learning Unit**
  University of Hertfordshire: www.herts.ac.uk/blu / blu@herts.ac.uk

The Blended Learning Unit’s strategic vision is for Hertfordshire’s educational provision to combine high quality e-learning opportunities with excellent campus-based learning in coherent, reflective and innovative ways. The Unit works with internal and external people to support innovation in blended learning and disseminate its research and experiences.

■ **SOLSTICE**
  Edge Hill University: www.edgehill.ac.uk/solstice

SOLSTICE focuses on enhancing student learning and the learning environment through supported online and blended learning, developed as a result of ongoing evaluative research.
Training and support that is available

Hands-on Training
The following is a list of the type of training and support in the use of applications that will be available for the academic year 2008/09 provided by the Learning Technology Team (LTT):

- Moodle
- Personal Response Systems (PRS)
- QuestionMark Perception (QMP)
- myLife/SharePoint
- Course Materials Repository (CMR)
- Online Coursework Submission (OCS)

Training tends to be scheduled before the end of each term. Sessions for departmental groups can also be provided, the timing of which can be negotiated.

Visit the ELeN (e-learning) website for details: www.essex.ac.uk/elen/staff/training.shtml

Pedagogy
If you are already technically confident but require advice and ideas about how to use the technology effectively – for example, how to embed it in the curriculum or blend it with other technologies – then the Learning and Teaching Unit (LTU) can help. Contact Nicola Billam (njbrya@essex.ac.uk).

E-Learning Network (Mailing List)
If you are interested in e-learning, there is a University e-mail list to which you can subscribe that is for members of staff. There has been a steady growth in interest in e-learning at the University and subscription to the ELeN mailing list will enable you to find out more about projects, funding, conferences and other activities.

If you would like to join ELeN, please go to:
www.essex.ac.uk/contact/mailinglists/default.aspx

Follow the online instructions. Please note that the ELeN list database is updated overnight, which means that there is an initial delay between joining and becoming an active member of the list.

Tips
- Think about what you want to achieve so we can ensure that the learning technology recommended to you is appropriate to your needs;
- Think about the time it may take to prepare your material and set up the technology so that it suits your requirements.

General IT Training
ISS provides training in a wide range of software, including Microsoft Office, SPSS, E-mail, and the European Computer Driving Licence. Details from:
www2.essex.ac.uk/iss/training
The Institute has undertaken numerous research projects relating to e-learning. The following are just a few:

■ **MiRTLE (funded by SUN Microsystems)**

MiRTLE stands for Mixed Reality Teaching and Learning Environment. It builds upon SUN’s Darkstar and Wonderland technologies to create an open source Virtual World (similar to Second Life). The aim of the project is to provide a 'mixed reality' environment for a combination of local (physically present) and remote (not physically present) students in a traditional instructive higher education setting. The project will augment existing teaching practice and foster a greater sense of community amongst remote students, and between remote and co-located locations.

■ **DELTA 2 (funded by the JISC)**

The original DELTA project created a web service for users to share and rate case studies of effective practice and their annotations (the 'growing context' concept) based on a semantic web approach. The user is able to choose appropriate resources in distributed locations based on their pedagogical needs. This was in part achieved by creating a pedagogical ontology. DELTA 2 is enhancing the service by making it able to cope with multiple ontologies (e.g. subject ontologies), different resource types, and to utilise meta-data harvesting to make it more efficient.

For more information on any of the above projects, visit the Chimera website, www.essex.ac.uk/chimera
Resources: books and websites

You may find the following books and resources interesting.

Moodle
- Moodle website: http://moodle.org/
- Moodle documentation for teachers: http://docs.moodle.org/en/Teacher_documentation
- Comparison between WebCT and Moodle: http://www.edutechtools.info/compare.jsp?pj=8&i=358.386

QuestionMark Perception
- Online resources: http://www.qmark.co.uk/uk/

Personal Response Systems
- Online resources: http://www.vanderbilt.edu/cft/resources/teaching_resources/technology/crs.htm
- Interwrite (the company that makes the University’s system): http://www.interwritelearning.com/products/prs/radio/detail.html
- 7 things you should know about Clickers (a PDF): http://www.educause.edu/ir/library/pdf/ELI7002.pdf
- Teaching with Clickers (a PDF): http://www.crlt.umich.edu/publiclinks/CRLT_n o22.pdf

General
- e-Learning support for staff and students at Essex: http://www.essex.ac.uk/elen/