



*Technology Enhanced Learning
in Research-led Institutions*

TELRI is a HEFCE-funded collaborative project with Oxford University, managed by the Academic Staff Development Office at the University of Warwick.

At its core, TELRI advocates developing curricula that encourage a research-orientated approach to learning. In doing so, students become equipped with both subject-specific

knowledge and skills and, at the same time, the broader capabilities of graduates that Higher Education should seek to develop, that employers value and which are of immense value to students in their later careers and lives. The project aims to help departments to make effective use of educational technologies to develop those skills and capabilities.

Two excellent educational technologists, Dr Michael Roach and Dr Steven Warburton, were appointed to the Project team and started work in October.



Mick Roach held previous posts at British Aerospace in research and development, and at Staffordshire University as Lecturer in Engineering Design. Over the last four years, he has worked specifically in educational development across a wide range of disciplines.



Steve Warburton held previous posts at Cambridge as a post-doctoral research fellow, is a summer tutor at the OU, and more recently worked specifically in educational technology research and support at Loughborough University.

Both have a wealth of experience in implementing technology-assisted teaching and learning across a wide range of disciplines and appreciate the departmental, institutional and national issues involved. They bring knowledge, understanding and creative thought to the Project from both theoretical and practical perspectives. This will greatly increase the input of ideas into the project's activities.

A number of departments at Warwick are directly involved in the Project, namely Biological Sciences, the School of Law, the Mathematics Institute, the Language Centre and the departments of Italian Studies, History, and Computer Science. It is anticipated that the ideas and materials developed during the Project will also be useful to other departments.

In-depth discussions have taken place with academic staff regarding the development of teaching programmes that make use of research-like approaches to learning and develop students' research capabilities. The type of rethinking in which departments have engaged is very much in keeping with the need - particularly driven by requirements for Subject Review - for departments to specify more clearly:

- ◆ overall curriculum design objectives of courses and programmes of study,
- ◆ specific learning outcomes of courses and modules, and
- ◆ how learning outcomes are reflected in the criteria and methods of assessment of student learning.

Emerging from this first level of work with departments is a clarification and improved understanding of those areas of a curriculum that might be delivered more effectively using educational technologies. Project members believe that it is important to approach things in an integrated manner rather than "bolt-on" approaches from which many educational technologies have obtained a bad name.

The TELRI Project is also concerned with overcoming barriers to successful implementation of technology-assisted teaching and learning. Already, we are building up a picture of how the *culture* of each discipline, as well as the *culture* of different institutions, need to be accounted for in any approach to implementing technology-assisted teaching and learning. The collaboration with departments in Oxford (and later also Durham, Southampton and Birmingham universities) also offers valuable opportunities. Working across this range allows us to assess not only how disciplines vary from one university to another, but also how institutional infrastructures can play an important part in enabling or inhibiting progress by individuals and departments in this area. In this way, the resultant TELRI framework aims to reflect both the cultural and technological requirements for successful implementation of learning technologies.

In the new year, a TELRI event will bring together individuals in departments who are directly involved in the project work, as well as those simply interested in the Project's approaches and outcomes. It will also offer an opportunity for further debate on the evolving framework of educational approaches being developed.

Research-based Teaching Approaches using the Web

Staff interested in the implementation of new teaching methods, particularly the development of web-based courses and resources, are invited to attend a seminar on *Research-based Teaching Approaches using the Web* to be given by Dr Mick Roach on Tuesday 19th February (see course programme for details of time and venue).

This session will explore approaches to designing courses that focus on student learning outcomes, which specifically and explicitly develop both subject-specific knowledge and research-like "scholarship" capabilities. Such approaches stem from educational models of learning that enable students' to develop competencies in problem-solving and critical analysis, but which incorporate innovation and creative thought.

Dr Mick Roach joined the TELRI Project (see separate article) following work on a project funded under the JISC Technology Applications Programme (JTAP) for the creation of study environments on the web (the COSE Project: <http://www.staffs.ac.uk/COSE/vlconf.html>). By applying the above pedagogic objectives to the design of the learning environment, COSE goes beyond the "tools" provision of the 25 or so web-based applications for conferencing and resource sharing, such as Lotus Notes and Learning Space, First Class and Web Board.

There is obvious overlap in the educational objectives of COSE and TELRI. However, the TELRI Project is working towards placing these research-orientated approaches within the context of the *culture* of specific disciplines - and indeed within unique institutional contexts. In doing so, the resulting course designs will assist the students in using learning resources and learning technologies to attain the specified learning outcomes of the course. This approach also advocates that students will learn in ways that develop their scholarship capabilities in a structured and increasingly autonomous manner, which is also of value in the development of distance learning programmes.

Courses based on deconstructing explicit 'real world' environments, such as engineering design problems or a secondary and tertiary sources in literature or history, provide the students with a range of specifically designed projects, applications or tasks, which develop particular research-like capabilities associated with the specific discipline.

In this way, academic staff should benefit from the session in understanding how to develop and deliver courses that are more accessible and transparent in their objectives and assessment criteria and thus enhance the overall course quality and marketability, as well as the students' learning experience. In other words, not only are the subject-specific knowledge and skills explicitly stated, but also those 'scholarship' qualities specific to the discipline and its research approaches, which are otherwise only implicitly developed, or under-developed. This will have immense benefit in Subject Review.



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