

The Ensemble Project

Semantic Technologies for the Enhancement of Case Based Learning: Project Summary

This three-year project (2008-2011) is part of the ESRC/EPSRC Technology Enhanced Learning Programme (Reference Number: RES-139-25-0403)

Project Director and Principal Investigator
Dr. Patrick Carmichael, University of Cambridge

Lead Researcher, City University London
Uma Patel, City University London

Case based learning is the pedagogical model of choice in learning environments in which the subject matter is complex, controversial or rapidly changing, and in which multiple perspectives and interpretations need to be understood. The affordances of the 'semantic web' provide a conceptual and technological basis for the development of flexible tools and associated pedagogies in which knowledge is developed, represented, adapted and then transferred. While semantic web technologies are revolutionising long-term preservation and enabling the retrieval of data from large and heterogeneous information sources, they have not, to date, been mobilised in advanced education settings that employ case based learning in support of higher order learning. The project will undertake research and development activities which will contribute both to understanding of pedagogical practice in case based learning across disciplines, and to the development of semantic web tools and learning environments. It will therefore provide a framework for developing the potential of the 'educational semantic web'.

The project will engage with groups of teachers and learners in two distinctive higher education sites (City University and the University of Cambridge) and disciplinary settings (three in each site, representing advanced undergraduate, M-level postgraduate and professional development courses). In all of these, learning from and with cases is an integral and assessed element. The research will address similarities and differences in the conceptualisation, construction and application of cases and the role of case building as an individual and group activity, and ways in which semantic web technologies support, enhance and transform these learning activities through the provision of robust, easy-to-use and flexible software tools and interfaces.

In combining key elements of digital repositories, semantic web technology and features of 'social software', we aim to generate a momentum of reuse through reconfiguration, adaptation, and collective action. Cumulation of case studies, rich case records and their underpinning sources can support future case building as well as allowing longitudinal and secondary analyses of rapidly changing educational landscapes. These will be further enabled by the use of grid technologies

across disciplines, institutions and educational contexts, and by user conferences with both face-to-face and online elements.

The project brings together a strong interdisciplinary team of experienced researchers from computer and information science and social science. They form the core of an extended community of researchers, teachers, students, technologists and professionals from industry which will engage in discipline-specific, interdisciplinary and interprofessional discourse and practice. It builds on the interdisciplinary work of existing TLRP projects (including two TEL1 projects) and will include a seminar series in which the work of the project will provide a focus for new interpretations, understandings and associations. Actor Network Theory (ANT) has been identified as an appropriate framework for analysis and as a basis for interdisciplinary discourse and knowledge building.

Two PhD studentships will offer opportunities for students to undertake projects which are truly interdisciplinary in scope and methodology: they will be supported by supervisors from across the project team. The project will generate research outcomes with significance for a range of academic, practitioner, organisational and policy audiences. It aligns the TEL programme themes of personalisation, flexibility and productivity, as well as addressing current priorities for e-Learning and e-Science. The project itself will act as a case study of inter-professional and interdisciplinary discourses between social scientists and technologists and more broadly across the technology-enhanced learning domain.

Contact Details

Dr. Patrick Carmichael
Centre for Applied Research into Educational Technologies
University of Cambridge, 16 Mill Lane, Cambridge, CB2 1SB

Tel: +44 (0)1223 765381
Email: tel@caret.cam.ac.uk
Web: <http://www.ensemble.ac.uk>

