Requirements for a Virtual Learning Environment identified through the research included:

- Allow geographically-dispersed participants in a Virtual Learning Community (VLC) to exchange experience, perspectives and make requests for help on relevant topics. This should be a managed process which encourages networks of mentoring relationships to develop.
- Allow geographically-dispersed participants in a VLC to work communally on problems of mutual interest in relevant areas. This should be a managed process which allows the work of participants to be held in a permanent knowledge base.
- This should also facilitate the formulation and dissemination of practical work processes related to the range of Egan Review skills.
- Develop the VLC as an extension of face-to-face learning experiences (blended learning), allowing personal contact to be maintained beyond the confines of scheduled courses.
- There should be a comprehensive knowledge base underpinning the interactions between the members of the VLC that covers the range of generic skills, demonstrates linkages, reflects a variety of domains and levels and should link to a wide variety of external web-based resources. The knowledge base should be capable of indefinite extension.

The diagram below illustrates the links between the social, communication features and the knowledge base.
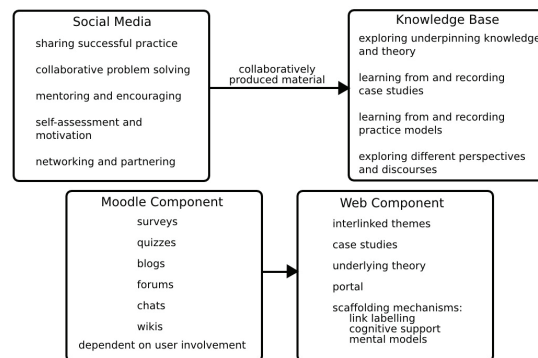
System Architecture: from conceptual design to implementation

This research is one of 11 research projects commissioned from Universities across the UK, under the ESRC/HCA Academy Joint Targeted Initiative on Skills and Knowledge for Sustainable Communities.

To see how the HCA Academy is taking forward lessons from the research, visit:

http://www.HCAacademy.co.uk/

This summary is published by Department of Geography & Sociology, University of Strathclyde, Glasgow

Further details of projects, contacts and associated briefing papers can be found at:
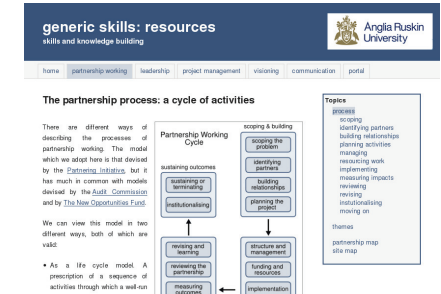
http://gs.strath.ac.uk/suscoms

Skills and Knowledge Builder for Sustainable Communities

Ann Hockey
Ian Frame

Department of the Built Environment
Anglia Ruskin University

Screen shot from Skills & Knowledge Builder

Social Learning On-Line

Key Policy Implications

- An on-line learning environment can provide opportunities for self-directed learning that works even within the contemporary pressured workplace
- Skills-assessment and learning resources must encourage individuals to reflect on their existing knowledge and experience
- A 'toolkit' approach is too simple to meet the complex needs of learning for sustainable communities
- Leadership is required to ensure that individuals are employed in the right roles and able to use their skills and abilities to the full
- Permanent forums for discussion could build confidence and bring out knowledge and skills, building up a shared knowledge base arising from practice
- Focussing on skills gaps (deficit model) is demoralising
- Skills taken out of context are just courses that do not connect with practice

Key Words

- Generic Skills
- Sustainable Communities
- Leadership
- Virtual Learning
- Learning for Built Environment Professionals

Background

Skills within the UK have been viewed as an important lever with which to create wealth and direct economic growth. The Egan Review (2004) set out how 'upskilling' was required to create sustainable communities – with new skills and new ways of working required by everyone involved. In particular, Egan drew attention to a number of skills gaps, not only in respect of skills relating to the built environment, but a 'broad range of generic skills, behaviour and knowledge', and the need for people to work together toward a common goal.

Approach

The research aimed to assist built environment professionals to assess the level of their own skills and to improve on them using a range of on-line tools. The requirements of a Virtual Learning Environment were developed through focus groups and a review of learning theory, relating to the nature of vocational skills, the contexts in which they may be effectively learned and the factors that govern effective learning in the workplace as well as the nature of the learning experience appropriate to generic skills and the working context.

Outline Methodology of Skills & Knowledge Builder Project
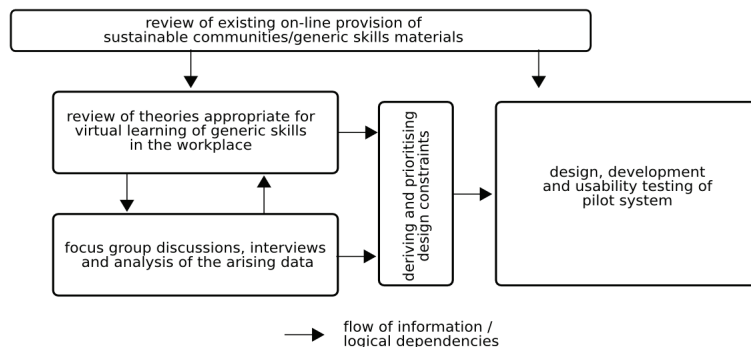
Focus groups were drawn from professionals employed in town planning, housing and regional development in the East of England and used at different stages of the research. The first group explored issues around the Egan Review generic skills, opportunities for learning in the workplace and attitudes to professional development. This focus group session identified particular issues around the challenges of creating space, time and support for learning within pressured work schedules. Together with issues identified through the theoretical review, this led to further semi-structured interviews to investigate conditions for effective workplace learning.

The second focus group was held at a later stage of the research and also used to inform the design of navigation around the Virtual Learning Environment. The same group also participated in usability testing.

Findings

The findings relate to two distinct areas: (1) skills and learning; (2) designing a virtual learning environment.

Skills and Learning

Learning by experience, 'on the job', versus specific training courses - Vocational learning occurs when new kinds of task are tackled confidently and with minimal supervision. The ability to learn from experience while under pressure, including handling mistakes, was identified as the mark of a professional. This process was viewed as superior, particularly for more generic and process-oriented skills such as consultations and interviewing, to attending training courses.

> decontextualised external training courses, remote from experience and the day-to-day processes of work, are viewed as 'ticking off' another skill

Malleability of the Egan skills, as capable of a wide range of interpretations and extensions: The Egan skills, whilst appearing to be a determinate list, can be extended and reinterpreted in a wide variety of ways, with some represented by a wide range of life skills. Many of these skills may be viewed as subordinate to a higher level skill of being adaptable and **'learning how to learn'.**

Individual and organisational factors in skills and performance: 'Training needs' focus on the individual, rather than on the way a team or an organisation performs, or the organisational culture. Many factors external to the individual affect this group performance.

> A key leadership role relates to ensuring that work processes, communication and coordination allow individuals to use their skills and abilities to the full, and that the right kind of people find their way into job roles

The labelling of generic skills, and the ways in which they are presented to learners: Skills which were felt to emerge naturally from ongoing work experience, 'common sense' or 'life skills' were labelled in an alienating and demoralizing way, and somehow taken away from those who, in fact, possess them. There was hostility to what were seen as 'managerialist buzz words' remote from everyday ways of thinking.

Isolation in the workplace: The one-to-one interviews explored the workplace learning environment of practitioners, and evidenced a move away from a more socially connected workplace, to a largely isolated and unsupported environment in which pressures on more senior staff, who in the past might have been able to take on a mentoring role, allowed them little time to pass on their experience.

The Virtual Learning Environment

The project demonstrated a means of providing flexible, reflective and contextualised learning that built on participants' knowledge and experience in a supportive, collaborative learning environment. In order to relate the resources to the work environment, the information is organised around processes (a partnership working cycle, managing a community visioning exercise, etc), with links into underlying principles and illustrative case studies. Thus, deeper learning and understanding emerges through practice, and in turn learning enriches practice.