

This publication provides an overview of the learning technologies used to support learning, teaching and assessment transformation.

Examples of the technologies used by practitioners and learners as they re-designed learning can be found in case studies and illustrative examples which are available from the **Transform** website: www.napier.ac.uk/transform.

A more detailed version of this paper **TESEP and Technology** by TESEP's e-Pedagogy Consultant, Professor Terry Mayes is also available from the **Transform** website.

Within the context of the learning and teaching principles developed for the TESEP project (**Refer to Publication: Transforming Learning, Teaching and Assessment the TESEP Way**), a key component of the project was to explore ways in which learning technologies could play an important role in enhancing the learner experience. The project was particularly interested in how 'social software' or Web 2.0 technologies, rather than institutional VLEs, could be used to encourage learners to be active in their learning, locate/create their own materials, work collaboratively with their peers and give and receive feedback as part of formative assessment.

For clarity, TESEP was not opposed to pedagogically appropriate use of institutional VLEs, some of which are now incorporating 'social software' functionality such as blogging and Wiki tools. Indeed, our practitioners demonstrated that VLEs could support TESEP pedagogical principles when learning activities were designed in ways that encouraged learners to actively engage in their learning, encouraged learners to share their learning with each other and provided opportunities for learners and tutors to reflect on learning and feedback.

The technology that TESEP found particularly of interest here can be classified by the following types of processes within Web 2.0 applications:

- For user created content (You make it).
- For locating existing content, including trends and overviews (You find it).
- For developing and sharing content in a community – 'crowdsourcing'. (You work on it).
- For evolving community-developed tagging and organisational schemes (folksonomies) for large sets of user-created content. (You name it).
- For interacting within virtual worlds. (You experience it).
- For communicating with peers, and for discussion (You talk about it).

Read More:

Examples of how TESEP practitioners used social software and Web 2.0 technologies can be found in the online **Practitioner Case Studies**. These are available on the **Transform** website: www.napier.ac.uk/transform

Technology Examples

This section provides examples of how social networking and web 2.0 technologies can be used in learning designs to engage learners in truly learner centred learning.

Learner-Created Content Technologies

Learner-created content technologies place the power of content creation and distribution into the hands of the learners themselves and make it easy for learners and their tutors to contribute ideas, objects and other content. These technologies are accessible via the Internet.

Access to these sites is not constrained to desktop computers. Indeed many learners will already access these sites for leisure purposes using **mobile technologies such as their mobile phones, PDAs and MP3 players**. The emergence of 'crowdsourcing' through tagging allows interesting material to float to the top and be found. Social bookmarking allows users to store bookmarked links in a form accessible on the web. It becomes social at the point when tagging (marking with a keyword) is added and learners can search each other's bookmarks. TESEP has found that Personal Development Planning processes can be used effectively in a number of ways to inform judgements on the impact of learning and teaching on the quality of the learner experience.

Learner Reflection Technologies

Learner reflection technologies enable learners to be reflective about their learning.

Learner Feedback Technologies

There are a number of ways in which technology can be used to provide learner feedback. These range from **personal response systems (voting systems)** used in large classes, through various kinds of **e-assessment software (e.g question mark, hot potatoes, WebQuiz)** to **e-portfolios** which can be built up over a sustained period, through familiar **discussion tools**, and then various social software methods by which peers can share and comment on each others' work. All these are good examples of how e-learning can support good pedagogy.

Feedback can, of course, be offered in a straight-forward way by tutors, responding on a VLE to learner assignments. In some subjects, like maths, automated feedback can be built into special purpose software that offers problems for the individual learner to attempt. In others, **simulations** allow opportunities for genuine interaction with a virtual world. For TESEP, though, a particular emphasis is on informal feedback from peers.

*Examples of this type of technology include websites like **Flickr, YouTube, Ourmedia**. These allow learners to classify and evaluate what is there and add to the existing content. Simple interfaces allow shared collections of any kind of media to be built.*

*Tools like **del.icio.us** allow examples, commentary and feedback from a potentially global audience, and learners have a low-risk, low-cost means to publish their own work.*

***Weblogs or blogs** are easily updatable personal websites and are increasingly used as a vehicle for learner self-expression and reflection.*

"The use of blogs and wikis was revolutionary for the team in the School"

*Even **podcasting**, (which would not be a good TESEP example if it was just used to 'deliver' content), is now being used in certain cases to provide a feedback channel from tutors to their learners.*

The feedback aspect of blogs can be seen in the ability of other learners to comment on postings, to post links to other blogs, and to keep track of blogs that reference their own. For peer feedback to be effective a culture of trust must be established.

Learner Community Technologies

Wikis allow groups of learners easily to create content, with the important feature that it is editable by any of them. In this way individual learners can decide when new material should be added and through collaborative editing a joint output will emerge that satisfies the whole group. TESEP emphasises the importance of placing learners in the role of teachers of their peers. When all members of a group are required to switch frequently between these roles, a culture of shared understanding about the learning process grows rapidly.

An important feature of Wikis is that edits can be tracked, so that both the group members and the tutor are aware of individual contributions.

Communities of practice and the emergence of **social networking sites** allow learners to create a profile for themselves, exchange views, and share content. They allow learners to identify links to like-minded others, both inside and outside the institutionally-defined boundaries of the learning environment.

*Examples of social networking sites are **Second Life, MySpace, Bebo and Facebook,***

Personalisation Technologies

Social tools that are specifically designed for the support of personalised learning are starting to emerge. Some institutions are starting to offer Elgg sites as secure internal communities.

Elgg is an open-source bundle of tools that lets each learner set up a blog, a web profile, an RSS reader, and a file repository with podcasting capabilities.

Personal digital technologies, like mobile phone cameras, can be used to allow learners to share their learning experiences from outside the classroom with their peers. Indeed, the main thrust of social software is to allow personally-created and chosen material to be shared.

Challenges for Institutions

The technology approaches described here, present some significant challenges for colleges and universities.

Learner expectations

There is growing evidence that many of the learners coming into universities and colleges are already making extensive use of Web 2.0 tools in their lives. The recent JISC reports on the learner experience reveal that the web is the first point of call, and their use of Web 2.0 tools is 'pervasive and integrated' and 'personalised'. Clearly such learners expect to use the same tools, or tools that are at least as sophisticated and powerful when they are learning.

Open Source Software:

A different, but equally challenging, set of issues face IT Directors/Managers as they try to respond to the growing demand for Web 2.0 tools within the constraints of running an institutional network service.

Hear More:

*Many of the challenges to existing ICT policies are explored in an interview conducted during the TESEP project with Louise Garden, Director of Information Resources at Glasgow Caledonian University. The audio link is available from the **Transform** website: www.napier.ac.uk/transform.*

Learner Literacy Skills

Not all learners have the capability to use technologies effectively in their learning. The need for a personalised audit of learners' digital literacy using diagnostic assessment tools on entry is therefore all the more important.

Staff development

All too often staff development in the use of ICT focuses on basic applications such as Microsoft WORD, Powerpoint etc. Staff need to feel comfortable designing learning activities that use technologies that often their learners are more expert in using. It is as important that teaching staff are empowered in the same way as learners to develop a knowledge and understanding of Social networking and Web 2.0 technologies through staff/professional development.

The use of Web 2.0 and social networking software effectively in their own professional development is an important way of enabling staff to experience these new technologies first hand.

Managing Perceptions

College and university staff tend to react negatively to the technologies that are already fully integrated in our learners' lives (particularly in the lives of our younger learners). It is not uncommon for institutions to ban the use of social software sites and tools such as **MSN, Myspace, Youtube and Bebo** in response to concerns about safety, suitability and security. Similarly, mobiles and iPods are equally unwelcome in formal learning spaces. Policies will have to change if such technologies are to be used to enhance learning.

Read More:
The Publication
Re-Thinking Learning Support
explains this in more detail.

TESEP Practitioner comment:
"A personal challenge for me was to build my own confidence in using new emerging technologies to enhance my teaching approach. I now feel empowered to try and incorporate a range of new technologies into the activities I set for learners and am pleased that I have improved my own skills in this area"

Read More:
A case study by Glasgow Caledonian University illustrates how the university has raised awareness of the kind of technologies described here through using a TESEP-like approach to the training of new lecturers. The case study is available from the
Transform website:
www.napier.ac.uk/transform

Interactive Tool:
The online Lecturer Induction Programme developed during the TESEP project provides opportunities for practitioners to develop their knowledge and understanding of Web 2.0 and social software and apply them effectively to re-designing learning activities. This can be downloaded from the
Transform website:
www.napier.ac.uk/transform

Further Reading

Links to further reading are provided in the full paper **TESEP and Technology** produced by Professor Terry Mayes which is available on the **Transform** website
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