

Same place – different space?

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“If we teach today as we taught yesterday, we rob our children of tomorrow.”

John Dewey (1859-1952)

Having worked at Leeds Met, and its predecessor Polytechnic, since 1980 (and in information technology-related areas) it is interesting to reflect on how the introduction of information technology has impacted on the deployment of staff as academics and administrators and the timetable as experienced by students.

In 1980, I shared a staff room, was timetabled for a mix of classes which included lectures, tutorials and practical work, provided handouts to students using a Banda spirit duplicating machine (I still remember the smell of methanol used to reproduce the purple text copies) and ‘presented’ on the chalk- (later white-) board or wrote on acetates for overhead projection. Word processors later allowed a higher quality of handouts, while presentation software heralded the large lecture PowerPoint era in the early 1990s. For more than 20 years, until 2001 when our first Virtual Learning Environment (VLE), WebCT, was introduced, there was little change in the mix of face-to-face learning delivery. However, even today, timetabling of physical resources still remains the primary means by which staff are deployed to support learning and there is no existing means of acknowledging staff time invested in providing and supporting online student learning. University structures and the annual cycle, of terms and semesters, still echo models of teaching and learning that have remained unchanged for centuries. Knowledge is no longer held by a few sages and instant access to digital information is now available via the internet. Continuous knowledge acquisition is a prerequisite for today’s world and appropriate use and integration of technology has the ability to facilitate this.

Twenty-first-century students have grown up in a world in which their expectation is that information is digital and online, immediately available and that non-linear (hyperlinked) routes can allow them to follow their own path to information discovery. Their resource use encompasses mobile phones and Personal Digital Assistants (PDAs) with instant access to the internet; iPods allowing them to time-shift access to information; the use of social networking sites, live blogging and updates of their current activities; and sharing their experiences through photo and video publishing. They have become creators as well as consumers.

Our VLE is as much a learning space as any that is physical, and there are opportunities to be gained by rethinking the organisational and teaching infrastructures that might be possible to provide increased cross-module, subject, theme and course coherence.

At the Futures of Technology in Education Conference held at Imperial College, London in October 2008 (<http://www.fote2008.com/>), John Hickey, from Apple, spoke about “Building 21st-century learning environments” and indicated that we need an evolution of education. Lawrie Phipps (JISC Programme Manager, Users and Innovation) reported on this session in his blog, saying that we should recognise that students are both consumer and producer and that in HE they are “becoming disconnected in an interconnected world ... Students expect an interconnected (academic) life; they see the real world as incredibly advanced and when it isn’t, they lose interest” (Phipps, 2008).

Our deployment of our Blackboard VLE, mimicking our physical spaces, and the use of PowerPoint presentations and Word handouts is affecting students’ expectations. Many might conclude that contact time is the only high quality interaction they have with staff and we should take care that VLE deployment is not interpreted as the ability to save on class contact and perceived as a money-saver. The resulting implication would be that online support of students has low importance and requirements of time, effort and resources.

We should plan for change with the 21st-century educational landscape. Without closer integration of virtual and physical spaces, we reduce our ability to support the more flexible learning environments needed for 21st-century higher education. We should ask ourselves “What are we blending with?” in our definition of blended learning. Our current use of our VLE and physical spaces is somewhat like geological strata: one layered on top of the other, and this discourages integration and complementary use of the best features of each. If staff need to generate materials for the VLE which are not giving added value to the staff/student experience, then it is likely to become merely a repository for the Word and PowerPoint materials students receive in their face-to-face interactions with staff. This duplication might also propagate the student view that attendance is unnecessary, as they can collect all materials from the VLE.

If we accept that students are more engaged when actively learning, using authentic tasks, and that realistic and relevant assessment is what we need in our realignment of our assessment, learning and teaching (ALT) environment, then we must assess how better utilisation and integration of technology enhanced learning (TEL) can help us achieve this.

Currently, we have no appreciable resource base to support staff in the creation of online environments. Most teaching staff do not possess the necessary information technology skills base (for example in web design, good navigation, consistency and accessibility). Should we be thinking of developing a university-based 'digital media' service to support the development of higher quality online materials which are more likely to be reused because of the investment made in creating them? What effect might this have on the quality of materials lodged in any digital repository?

The Technology Enhanced Learning (TEL) team is currently involved in many Joint Information Systems Committee (JISC)-funded initiatives. However, the sustainability of these activities may be compromised at the projects' end without a broader strategic appreciation of how all these 'jigsaw pieces' may fit together. Are we not involved in these initiatives because we are interested in how we can improve the educational environment? The continued generation of the digital equivalent of Banda handouts and presentations by using Word and PowerPoint does little to reassess the potential of integrating our physical and virtual learning spaces. Indeed, to the contrary, it seems that the use of 21st-century technology has provided no opportunity to re-evaluate how teaching and learning should now be provided in a world which expects continual knowledge updates.

Students will react, Pavlovian-style, to the way in which we present materials which are disjointed – presentation, hand-out, assessment – and the net effect will be that they focus only on the next hurdle that they must overcome.

Technology enhanced learning is but one facet of our educational approach to using effective teaching and integration of assessment for, and of, learning. Our rethink of the implementation of our ALT strategy should now take into account the technologies at our (and our students') disposal.

Our teaching approach is still much the same. Even our 'innovative' invention of reusable learning objects, still with roots in more traditional academic thinking, may not serve student needs. The wealth of digital

information available on the internet now requires that students are much more active in questioning its veracity. This in itself is enough to encourage universities to move from the model of "the sage on the stage" to one of "the guide on the side".

Today's students typically have technology within easy reach:

- hardware: camera/phone, PDA/iPod, laptop and digital storage devices
- online services (wireless or 3G cell-phone communication):
 - Facebook social networking
 - YouTube video sharing
 - Picasa and Flickr photo sharing
 - Skype voice and video contact services
 - blogging and Twitter social messaging
 - Google and other specialist search facilities
 - Delicious and Digg cataloguing and bookmarking systems
 - RSS subscription information feeds and podcasts.

We should pause to reflect: anytime/anywhere technology allows students to work in ways that used to be impossible and that might be frowned on in traditional academic circles. How do today's students actually work? They work 'JIT' (Just In Time).

What models might we explore? Should we begin to design scenario-based and problem-based learning across disciplines and Faculties? Disciplines such as Architecture and Engineering already work within a framework such as this, allowing portfolio development, problem-based learning, collaborative and team activity, peer review and assessment, critical reflective self-appraisal and a workshop environment that is project-based. A situation such as this would not only make learning drive the technology, but radically require that the explicit focus of attention is on students.

We should continue to develop our ideas about authentic learning situations and assessment of students' understanding within them. Constructive alignment of learning and teaching activities, structured and designed to meet learning outcomes with assessment intended to measure the extent to which these have been achieved, is merely a first step in designing a model of 21st-century pedagogy. Our use of virtual and digital technologies could well be the glue that provides the flexibility needed for a pedagogic paradigm shift.

References and further reading

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