E-mentoring in the School of Education

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[The report below is a summary of a longer document. For further details, please contact the author]

Background and rationale

Each School (10) in the University of Wolverhampton has appointed a Technology Supported Learning (TSL) Co-ordinator. The role of the TSL coordinator is, amongst other more numerical objectives, to encourage the application of technology in support of student learning. In doing so the TSL coordinator engages in 5 core activities:

1. developing one's own understanding of the advances of technology in an educational context – an e-learning pedagogy;

2. maintaining awareness of emergent technologies – for instance interactive whiteboards;

3. developing one's functional skills in the use of educational technology;

4. increasing one's practice in the application of those skills;

5. sharing this knowledge with others in order to support and promote the use of TSL.

The activities identified 1 – 4 are all essential prerequisites for optimising activity 5 and it is this staff development role which is the most important, and the most demanding for the TSL coordinator. The activities are represented in Figure 1.
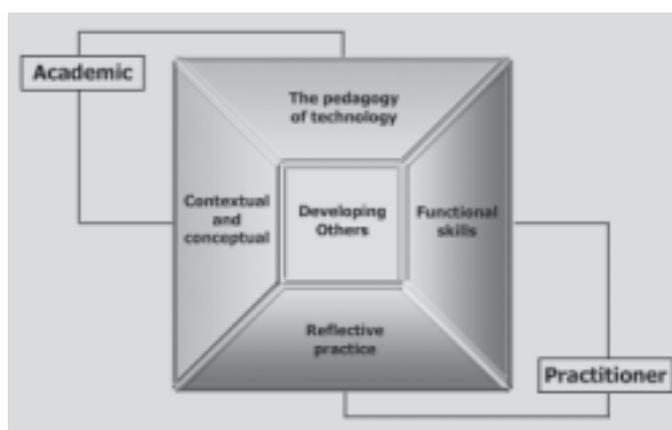

Figure 1: Core activities of a Technology Supported Learning Co-ordinator

These 4 activities can each be further unpacked:

An **e-learning pedagogy** implies that the use of TSL is somehow different to other forms of learning and teaching; that a whole new approach is required and that existing practices retain no validity. This is clearly not the case. Effective learning will always be enhanced by good quality teaching and good quality teaching is generally characterised by four features:

1.   A well structured knowledge base
2.   An appropriate motivational context
3.   Learner activity
4.   Interaction with others

(Biggs and Moore, 1993; Biggs, 1999)

If accepted, the conception of learning and teaching outlined above should underpin all that the teacher plans and does and can be evidenced in how students learn. When discussing an e-learning pedagogy, one has to concentrate not on the underlying conceptions (though these remain an essential component of teacher education and continuing professional development), but on the unique methodologies that have emerged with the increasing ubiquity of technology; methodologies such as WebQuests; treasure hunts; synchronous and asynchronous discussion; on-line assessment and virtual classrooms.

In recent years more teachers find themselves with ready access to data projectors, network connections in their classrooms and classroom computers or laptops. Interactive whiteboards have been incredibly successful, particularly in the schools sector, and virtual learning environments (VLEs) are now being used by 40+% of FE and HE institutions (UCISA – Armitage et al, 2001). In addition to those mentioned above, these technologies include DVD; speech recognition; streaming video; wireless networks and mobile computing e.g. WAP (Wireless Application Protocol); personal digital assistants and wearable computers. Maintaining a critical **awareness of emerging technologies** is obviously demanding.

To help colleagues to set up data projectors, calibrate an interactive whiteboard, create a hyperlink in a PowerPoint, embed a sound file into Word document, create questions sets for the class voting devices, upload digital images to the VLE or start a bulletin board (forum) thread, requires functional skills. It is not realistic to expect an academic member of staff to be proficient in all forms of educational technology; but it is necessary to become a quasi technician.

Simply having an experience does not mean that learning will take place: it is likely that the individual will be so deeply involved in the experience that opportunities for reflection are not available or are detrimentally minimised. It is necessary therefore to step back from the experience and pause to reflect (Moon, 2000). **Reflection on action** is what distinguishes this activity from the previous one. It is not simply a case of practicing your functional skills but rather putting them into practice in a range of learning and teaching contexts and then describing; analysing; synthesising; theorising and concluding the experience – all aspects reflection (Schön, 1987) – so as to come to understand how *this* technology might be best used in *this* situation and how it might be adapted to improve learning in another.

Hughes, Hewson and Nightingale (1997) studied approaches to implementing e-learning in 20 Australian universities and identified three approaches to **developing others**: integrated; parallel and distributed. The integrated approach is a top down approach where training is provided centrally and staff avail themselves of the opportunities offered from a corporate development programme. The parallel approach allows for school-based interventions alongside central provision which, according to Hughes, Hewson and Nightingale (1997), allows recognition of wide range of teaching and learning issues which might not otherwise be evident in a wholly central provision. The final model is the distributed approach, which is more bottom-up than the integrated or parallel approaches. A range of providers emerges in various locations with very minimal co-ordination. One could argue that within this institution we have migrated from an integrated (cascade) model to one which is more distributed; supporting local expertise with corporate training workshops. However, notwithstanding maturation of our strategic approach, the delivery remains largely workshop-based 'show and tell' or 'innovation exposure'. Often the results of this approach are short-term delegate optimism which swiftly diminishes once delegates

are back in their workplace resulting in little tangible evidence of improvement or implementation.

The innovation

In this context e-mentoring is the combined role of technology expert; teaching practitioner and mentor. It is not the same as e-moderating which describes the specific skills of managing online learners (Salmon, 2000) rather it describes the process of exposure linked to skills development linked to individual tutoring linked to classroom support. Clearly the costs of such an enterprise are high but only when considered simply as input costs. The following few paragraphs will argue that when actual outputs are considered e-mentoring is more effective and more efficient than integrated or cascade approaches to developing capable e-practitioners.

For the past 3 years TSL development in the School of Education (SEd) has taken a locally distributed approach. Workshops have been organised and run on campus using school expertise and facilities; e-learning has been recurrent feature of staff development, and TSL remains high on the agenda of subject; division; school and board meetings. Colleagues have been encouraged to avail themselves of TSL support on a just-in-time basis and tailored workshops have been provided for subject teams or to support module development. This approach has seen a rapid and continuing growth in the use of technology to support learning with 133 WOLF topics (none of which contain only module guides); 15 interactive whiteboards in regular use and all undergraduate presentations conducted using PPT. Whilst this approach has been successful it did not seem to move beyond a functional or 'needs must' level. This project provided an opportunity for investment in a person-centric rather than a skill-centric model.

Four colleagues were nominated for the project. None of the participants were given any remission and all were informed of the project's purpose. During an initial whole-day workshop a series of e-learning skills were demonstrated, practiced and evaluated. Importantly ideas were shared about how each skill or approach could be used to support learning in each participant's subject area. Details of a follow-up workshop were negotiated and the participants were asked to arrange the times and the venue themselves (three workshops have taken place so far).

During the project regular contact was maintained with each participant. Time was spent working collaboratively on materials and approaches, skills were recapped or honed and ideas were formed, reformed and implemented. Materials that were created were piloted and shared amongst the group and the participants looked to each other for support and advice as readily as they turned to the facilitator. One of the aims of the project was to provide support and feedback within the classroom; to 'be there' when the 'new' e-learning method was first implemented. However the vagaries of timetabling and the fact that many of the approaches and methods being developed were for the next cohort meant that it was only possible to 'be there' for one of the participants. The classroom support is seen as an essential aspect of this approach as many teachers report high anxiety when working with IT.

The mentor in the classroom can just be a smiling face in the background, can help with technical problems and can provide evaluative feedback, though their exact role should always be a product of negotiation with the teacher.

Outcomes and evaluation

Getting everyone together on a regular basis proved difficult. All of the participants wished for more time. They 'found time to be well managed' but 'of course would have liked more but feel lucky that we had the time we did - day blocks were great'.

In addition to the difficulties created by trying to schedule whole- or half-day sessions, other logistical issues were identified. 'I still can't access rooms with (interactive) whiteboards for teaching... room-driven curriculum means that experiment and risk are often curtailed' (Teacher 2). Similarly, 'still no whiteboard in teaching room so difficult to follow up'(Teacher 3). Investment in Interactive Whiteboard (IWB) technology has tended to concentrate on larger rooms, perhaps seeking a better return on investment. The larger rooms tend to be heavily booked by large undergraduate courses meaning that specialist groups and teacher education often struggle to find suitably equipped classrooms. Mobile IWBs do not provide a suitable alternative (Sutherland, 2001).

Notwithstanding the difficulties, the project is held by all of the participants to have been valuable and significant; indeed the project continues to run beyond its initial timeframe. Teacher 1 found that the project provided 'a very useful opportunity to examine some of the ICT facets and share anxieties within a small group' and that it was 'good to have practical opportunities to try out'. The management of group time was 'efficient and concise... to the point and matched our needs'. Importantly, 'classroom practice was aided' and the project was 'confidence boosting' (Teacher 1).

Teacher 2 'found the small group sessions and 1-1 to be very beneficial. Hands-on opportunities gave a safe space to be silly - in a positive sense - and experiment with like-minded peers. Sessions did inspire me to use technology more in all my teaching. Loved the interactions with co-ordinator and peers, great rapport was evident'. Teacher 2 concludes that the project was 'very useful, highly practical and very appropriate to the group needs... (it) has created a mini TSL culture within the school'.

Teacher 3 felt that the project 'was very good. It responded to our needs and gave clear guidance about new possibilities for TSL'. Further, it was a 'good use of the time; lots of one-to-one because only 3 or 4 of us and so was tailored to our needs'. None of the teachers involved attended the project out of curiosity or out of a desire for personal development. They have committed significant time and energy out of a desire to improve the quality of learning for their students. As an example Teacher 3 records 'I have used the annotation tool and recording tool with trainees; have extended trainees' use of WOLF; have set up WOLF sites for other colleagues in secondary team and given them an introduction to managing and using their site (basic!!); have used the interactive whiteboard with trainees; have taught them PowerPoint and set tasks requiring them to use it; have introduced them to WebQuests'. An impressive, though not unique, achievement for a colleague who only 6 months ago suggested a rating (out of 5) of 'probably 2' in terms of personal capability with educational technology.

The adoption of a distributed, rather than an integrated or parallel, approach to e-learning development happened at an early stage of this institution's TSL project; partly because of the logistical issues described earlier but also because of the desire to integrate the development of technology skills into a curriculum specific context. Exposure and show-and-tell workshops bolstered by flexible support formed the backbone of SEd provision and provided a robust platform for wide TSL adoption. However, development plateaued and alternative methodologies were sought. This paper has discussed a CeLT-funded project in which a small number of academic staff were mentored over a six month period. Evaluation of the project by the participants is very positive though all would like yet more time to develop their skills and practice. Importantly the outputs, both tangible and perceptual, have far exceeded those associated with the standard workshop approach. For example: 'I am now more likely to take risks and experiment with technology. I enjoy researching and trying out new things and intend to make much more use of WOLF this year' (Teacher 2).

Future developments

This project has provided a glimpse of what is possible when a small number of staff are offered very focussed TSL support as part of a continuing programme. The project has benefited from having 3(4) very enthusiastic participants though it might be reasonably argued that the design of the project itself helped enthuse, inspire and motivate those involved. Three other approaches to developing e-learning expertise are also being evaluated: a 1 week residential block; two 2-day residentials and a series of 2-day workshops culminating in a showcase event where participants share the product and process of their e-development with peers.

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