Case Study

A conversion among the pebbles? Using an eportfolio to support PDP with year 2 Electronic Engineering students.

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The background context

The second-year Electronic Engineering under-graduate degree programme contains a module called Engineering Design and Professional Studies. During the module students learn to use PDP processes to plan and reflect on their professional development, and prepare a portfolio for assessment. There are usually approximately 70 – 80 students on this module – a significant number are international students.

The current practice

A generic template for a paper PDP portfolio had previously been designed, but it did not fit closely with the learning activities in the module, and had the usual disadvantages of paper as a medium – especially for students of Electronic Engineering who naturally gravitate towards computer-based activities. This group became the first to pilot the new eportfolio system when it was introduced in September 2007.

The challenge

Initially the aim was to pilot and evaluate the use of PebblePad as a tool to support the development and assessment of PDP processes (as described above). With successive years, the challenge has evolved into one of winning hearts and minds of both students and staff who are minded to be sceptical about both PDP as a process, and the use of proprietary software provided by the institution as opposed to creating their own or choosing from a range of existing web 2.0 tools.

The purpose

As this group was the first to embark on the pilot of PebblePad, their experiences and responses had a fairly high profile – the intention was to use lessons learned from this pilot to inform approaches and models to be used in other contexts or disciplines. It follows that a negative response from students or staff would set us back, or at least make us think again and perhaps question our assumptions regarding our current practice.

The approach

In the first year of the pilot, the focus was on familiarisation with the tools and functionality of PebblePad.

> Activities were converted from the existing paper portfolio template, and students were required to submit for assessment a webfolio documenting their development.

The outcome was reasonably successful in that all the students were able to create and submit their webfolios, and a number engaged quite creatively with the activity and presented considerably more information than the minimum required. The following year there was a change of module leader, so we could not build automatically on the experience and expertise gained in the previous year. Despite this, a similar approach to the first year was adopted, but the response from students and staff at the end of the year was less positive, to the extent that the module leader was proposing to drop the subsequent use of PebblePad. To prevent this happening, the PDP Coordinator invested a substantial amount of time in redesigning the model used – the aim was to achieve closer integration between the core learning activities in the module (based around an enterprise project) and the use of PebblePad to support reflection on that learning.

The issues

Students on this programme have consider-able understanding and expertise in technol-ogy, so there were few technical barriers – in fact the students were largely able to teach themselves to use the tools in PebblePad, with the help of an initial demonstration, printed help sheets and the online help. If anything, the issue was not that the technol-ogy was difficult to master, but that many of these students disliked being constrained by an off-the-shelf system, where they would have preferred the challenge of designing their own.

However, conceptual and cultural barriers were a different matter. Some students showed dis-tinct aversion to the idea of sharing explicit, structured reflection on their learning and de-velopment, dismissing it as 'not for engineers'. The earlier educational experience of others had simply not prepared them for critical self-appraisal. The key issue, though, was how to ensure that students saw this as a relevant, meaningful and useful activity, and one in which they had some ownership, rather than a mecha-nistic process they engaged in to pass the assessment.

The result

The redesigned model sets out a minimum number of activities that students are required to do to pass this part of the module assessment – one of these is to complete a form containing structured, reflective questions, the other is to submit a revised CV. Over and above this, the students were invited to keep blogs of their ex-periences, and to use the webfolio tool to cre-ate a more substantial account of their learning during the module, on the basis that it would be a useful record for their own purposes when applying for placement positions. It has been

gratifying to see how many have chosen volun-tarily to do more than the minimum, some even creating quite elaborate presentations.

> " Significantly, however, even where the submissions contain the minimum in terms of number of documents, the quality of the reflection is generally pleasing and suggests that the students have engaged with the activity in a meaningful way. "

The learning

PebblePad allows both for the use of highly-structured models or templates pre-designed by a teacher, and for users to have complete ownership in the way they use the tool (to-gether with variations between these ex-tremes).

This might be seen as mirroring the staging posts in the development of an independent learner – clearly there are contexts where more structure and support is initially needed, to help students acquire skills or understand what is re-

quired of them. On the other hand, if we want to encourage students to reflect in a genuine way on their learning and we over-structure the activities that we set, we risk compromising the authentic nature of their responses and also their sense of ownership and commitment. The challenge is to find an appropriate balance to suit the needs of any particular learner or group of learners.

In brief

- Allowing students complete freedom to choose whether and how they engage with eportfolio based learning is risky – some may engage and others not.
- Requiring them to engage via a tightly-structured and possibly assessed activity may result in resistance and less-than-authentic responses.
- It is helpful to be aware of this, think it through in relation to learning outcomes, and consider the options when planning how to use PebblePad to support learning.

Acknowledgements