

Assessment, Learning & Teaching Journal

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CELEBRATING NATIONAL TEACHING FELLOWSHIP PROJECTS

The Assessment, Learning and Teaching Journal

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Scope

The journal is practice-based, reflective and pragmatic, comprising articles of up to 1,500 words relating to:

- fostering a supportive learning environment to enhance learning and teaching
- rebalancing assessment practices to improve formative assessment and feedback to students
- targeting, recruiting, supporting and retaining diverse students
- supporting, rewarding and developing teaching staff
- fostering research that supports teaching
- fostering creativity in curriculum design
- promoting student employability throughout the curriculum and engaging our students in work-related learning
- broadening staff and student horizons within the curriculum.

Book reviews of up to 200 words are also invited.

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Editorial

When we launched the Leeds Met Assessment, Learning and Teaching Journal in 2006 its aims were to build awareness of innovations and research and to share good assessment, learning and teaching practice across Leeds Met. This special issue of the Journal is dedicated to raising awareness of a collection of national Higher Education Funding Council for England (HEFCE)-funded projects managed under the Higher Education Academy's National Teaching Fellowship Scheme (NTFS). The project strand of the National Teaching Fellowship Scheme was set up in 2007 to provide funding for institutions to build on the expertise of National Teaching Fellows. Project teams are able to bid for funds of up to £200,000 for use over a period of up to three years with a view to bringing significant benefits to students' learning experiences across the sector.

Nineteen National Teaching Fellowship projects have been awarded funding since the project scheme began in 2007. The papers in this issue have been selected on the basis of being representative of the range of work addressed by the NTFS projects. They outline work to date and highlight issues and opportunities for cross-fertilisation of ideas and practice.

The projects described in this Journal generally fall into two groups: projects that focus on managing transitions into and out of university and the development of essential skills to support these transitions, and projects that consider aspects of learning in particular contexts.

Representative of excellent work being undertaken in relation to learning contexts are the project at the University of the Arts considering creativity and work-related learning and the Open University's investigation of the benefits of e-learning in a particular context. Developing the capacity of practitioners to research aspects of Personal Development Planning is addressed by a consortium led by the University of Bolton.

Work being undertaken at Manchester Met, the University of Liverpool, Stockport College and Leeds Met focuses specifically on designs that can support students as they move into undergraduate education; transition from university and preparing students for the workplace is the focus of projects at Birmingham City and the University of Worcester; supporting student learning journeys through undergraduate and postgraduate research is being addressed by projects at the Universities of Gloucestershire and Brighton respectively; and a project from the University of Oxford (an individual NTF project rather than one funded under the scheme's project strand) looks at how teaching can be developed in research-intensive universities. This issue is introduced by a paper describing the challenges of getting an NTFS project off the ground.

Further details of all the NTFS projects, including links to each project's website, are available at:

www.heacademy.ac.uk/ourwork/professional/ntfs/projects

I'd like to thank Andrea Rayner and the Leeds Met editorial team for once again pulling together an interesting and very readable journal, and the NTF project teams who have contributed so generously with their time and expertise.

Ruth Pickford

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Transitions and tensions: getting a project off the ground

Dave Burnapp

This paper describes the steps which have been taken to initiate a project under the National Teaching Fellowship Scheme (NTFS) at the University of Northampton, concerning international collaborations in higher education. This particular project was launched three months ago so as yet has no findings to report; however, the project initiation processes described here might themselves be informative. This paper is mostly a reflective account concerning personal and professional development and therefore uses an interpretative approach. This is a narrative, albeit a narrative that is as yet incomplete, hence it cannot have the usual narrative structure of orientation, complication, resolution and evaluation, and instead will be structured by describing a series of completed transitions (complications that have been resolved) and a series of tensions (complications as yet unresolved). As is suitable for a reflective account, the remainder of this paper will be written in a subjective style.

In order to be eligible for NTFS project funding the research team needs to include a National Teaching Fellow (NTF), so the first part of this paper covers my transition from being a teacher to becoming an action researcher, then a National Teaching Fellow. My main area of teaching concerns preparing international students for degree courses; hence I have been involved in pre-sessional English for Academic Purposes (EAP) and Study Skills courses, and with supplying ongoing language support for students. Over time, witnessing the frustrations of international students and their teachers, I began to suspect that the types of intervention we were using had little effect; what was being done was necessary but not sufficient. I suspected that something was missing: the students' needs were being misdiagnosed. This suspicion led me to find out more about processes of change related to international education, first by reading research reports, then by carrying out research myself, leading me to develop hypotheses and design experimental interventions. By accident rather than design I stumbled into being an action researcher, and this research in time became more structured as I used it as the subject matter of my doctoral research. The next step, when I was confident that I had findings that could inform not just my own practice but also that of others, was to begin to disseminate my ideas, and that started

the transition to becoming an NTF.

Possibly colleagues of any NTF could accuse them of taking their topic of interest to a level bordering on obsession. In my case the topic of interest was a strongly held belief that successful internationalisation of higher education can only come about by an open exploration of the underlying and often unstated assumptions concerning what is the nature of knowledge and hence the resulting practices of teachers, students, quality assurance staff, careers advisors, and indeed every other university stakeholder. A simple example can illustrate this: to teach an EAP course component about the language of discussion will not of itself bring students to participate in seminars if they have not had the opportunity to explore why, in these situations, discussion is seen as a route to learning, particularly so if their previous education journeys have taken them on radically different routes. Their previous experiences will have equipped them for other tasks; competences which are expected, accepted, and respected elsewhere but not in their new setting. Similarly if academic staff have development opportunities to explore cultures of learning, they can subsequently reflect on their own practices and be better able to explain and justify their expectations, and may be better able to see and value alternatives. I began therefore to develop training materials for staff and students to encourage them to link their practices to basic beliefs about learning, and then ran training courses in my own University and – via the Subject Centre for Languages, Linguistics, and Area Studies – across the sector, made presentations at conferences and published my findings. This increasing activity led to my becoming an NTF in 2007.

In order to bid for NTF funding I needed to begin another series of transitions, as instead of designing a discrete piece of research I needed to design a complete project. My previous research had largely been carried out individually or with only one colleague, looking at a specific activity over a limited period of time. To bid for this funding, however, required the design of something with multiple facets. In terms of time, the project would need to have a three-year span, hence needed to be conceived as a series of phases which themselves would each be more complex than anything I had done before. In terms of people, it would need to have a team with specified roles, the involvement of

institutional management, an external evaluator, and an advisory group. In terms of structures, it would need web-based resources, a system of financial reporting, and various networks for communication. Above all, remembering that this bidding was a competitive process, the intended project would need to demonstrate that it would have an impact across the sector while still being feasible: not something too hard, not too easy. The resulting scheme can be summarised as:

- Year 1: to read published reports concerning various forms of international collaboration
- Year 2: to undertake primary research on a selected sample of case studies
- Year 3: to adapt the findings to develop a linear research report and an electronic text of coded fields so that the details of planned activities can be matched to previous schemes to create customised reports.

The few months since hearing that the bid was successful have included the third transition, from being primarily a researcher to becoming primarily a project manager. This transition is incomplete and from this tensions have emerged. The best comparison is to liken this transition to the process of culture shock: an initial feeling of elation, a subsequent period of doubting my adequacy, a feeling now – three months in – that the project can be accomplished but that it will be a hard grind.

The first tension concerns the competing demands on my time of project management and research. Most of my time in the first three months has been taken up with project management activities: recruiting advisors; setting up the website; writing reports for meetings; attending meetings; dissemination of the project's aims. Little time has been left for reading, so I need to make the time I allocate to the project elastic.

The second tension concerns the demands on other people. Although each of the other team members has a portion of their time allocated to the project this is only a comparatively small amount of remission and they retain their other existing duties. Related to this, although they are willing participants and can recognise the potential value of the project, they have not spent the past ten years on a personal learning trajectory which has this project as the end point: this is my obsession, while they retain their

own topics of interest. The project also requires a time commitment from others outside the team who receive no remission from other duties; these include managers within the university; the advisors who have been recruited from around the world; and the participants (staff and students) who we hope will agree to be interviewed and assist our primary research in other ways.

The third tension, or set of tensions, concerns competences. The transition from researcher to project manager involves taking on new roles such as risk analysis and developing new literacies such as those related to Web 2.0 applications. The most important competences of all are the range of soft skills linked to communication and team working, made more crucial as many participants are volunteering their input, and made more critical as the nature of the project will necessitate cross-cultural communication. As the project proceeds, new skills and competences will be demanded, so this is a tension that can never be resolved, and probably a project manager can always be thought of as constantly chasing the horizon.

In conclusion, taking on any new task or responsibility inevitably involves change, and this account illustrates this in two ways. First, it openly lists the changes related to this project that have already happened and those which remain underway. Second, and far more importantly in relation to the project aims, it is an illustration of a text that has surface linguistic features which reveal an underlying philosophy of learning. The style of text I have used is linked to ideas that learning is about reflecting on personal change rather than accumulation of facts, that learning is socially constructed rather than ploughing an individual furrow, and that those engaged in knowledge creation are subjective, participative, and self-evaluative. Much of what happens now in universities in the English-speaking world, for example the use of reflective portfolios, rests on similar understandings which may differ from the definitions of learning elsewhere. The project intends to explore these differences.

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Absorbing the shock of the early undergraduate experience

Kate Kirk and Alan Greaves

The SHOCK ABSORBER Project is a collaborative venture involving five contrasting undergraduate programmes: Law, Biomedical Sciences and Photography at Manchester Metropolitan University, Archaeology at the University of Liverpool, and Social Work at Stockport College. The five programmes differ in subject/discipline area and vary in size of cohort (between 30 and 280). The project is in its second year of operation and will be complete by summer 2010. The overall aim is to produce a 'toolkit' for interconnected learning, teaching and assessment strategies for first-year undergraduates. The toolkit will be flexible and adaptable for implementation in a variety of subject/discipline areas and institutional contexts.

Background and rationale

Early 'drop-out', failure or dissatisfaction in the first year in HE appear to have multiple and complex causes (Yorke, 1999; Yorke and Longden, 2007; Tinto, 1994). While financial and personal reasons are commonly given for poor student engagement and early drop-out, the First Term Student Experience Survey carried out by the SHOCK ABSORBER Project found that the following issues are also significant:

- wrong choice of course/lack of pre-course information
- feeling isolated – the need to establish peer and friendship networks
- lack of timely support for disability and dyslexia requirements
- being overwhelmed by induction processes
- remoteness of staff, especially when much of the early experience occurs in large lectures
- uncertainty regarding workload, assessment criteria and level
- lack of timely and meaningful feedback on assignments.

In response to the above, the SHOCK ABSORBER

project is developing innovatory activities to engage students and increase their confidence, knowledge and scholarship skills in order to alleviate the 'shock' or anxiety often associated with early experiences in HE. Taking the topic of the first assignment as a common thread, a 'holistic' approach to pre-entry, induction and the first term experience is being taken. Early opportunities for collaborative group work, peer learning, enquiry-based learning and formative assessment and diagnostic feedback are designed to enable students to engage with each other, with teaching staff and with curriculum content. The project team believes that these interventions can make a significant contribution to student success in year 1 and can have a profound impact on the development of independent learning, autonomy and growth in self-esteem and confidence. The strategy adopted is designed to meet the new and changing demands of an expanded HE sector and contribute to an inclusive learning experience for an increasingly diverse student body. It is not intended as a 'spoon feeding' mechanism or a remedial approach, nor is it based on a deficit model of our students. The goal is to enable all students to become autonomous learners, reach their potential and succeed.

The cyclical development of the project and the evaluation of its impact on the student experience are inextricably interwoven within the action research methodology (Rossi et al, 2004).

Participatory research methods encapsulate 'the student voice' to influence, shape and evaluate the toolkit (Rowland, 2002). The project is in its second phase of operation, so quantitative and qualitative data gathered through detailed surveys of pre-entry, induction and the first term experience inform the development of the toolkit. A final comparative analysis will examine the influence of SHOCK ABSORBER strategies on achievement and progression. SHOCK ABSORBER interventions are illustrated in the table below. A case study provides detail of developments in Archaeology at the University of Liverpool.

Table 1: Common reasons for poor engagement in the first term in HE					
Lack of pre-course information	Isolation – need for peer and friendship networks	Remoteness of staff	Lack of timely support for disability and dyslexia requirements	Uncertainty regarding workload, assessment criteria and level	Lack of timely and meaningful feedback on assignments
Choosing the wrong course	Being overwhelmed by induction				
S h o c k A b s o r b e r					
Activities linked by focus on first assignment					
Pre-course activities to increase knowledge of course content, assessment topics and criteria	Early opportunities to work with peers, collaborative group work	Early tutorials /Personal Development Plans (PDPs) Tutor availability – ‘drop-ins’	Early involvement of services for disabled and dyslexic students	Initial tasks for the construction of PDPs	Peer, formative and diagnostic assessment Speedy constructive feedback to support the production of first formal assignment

Crossing the threshold into Archaeology: a case study

Activities presented here are an example of an intervention from the SHOCK ABSORBER ‘toolkit’ and were piloted at the University of Liverpool in September–October 2008. Initial feedback from students has been favourable.

One commonly cited reason for students leaving university early is ‘having chosen the wrong course’ (Yorke and Longden, 2007). This may be partly due to lack of pre-course information on curriculum content or it may be that students have already formed a false impression of their chosen subject. This scenario is compounded in disciplines where popular media images boost recruitment, but adversely affect retention when students realise that the subject’s reality does not equate with its image. A few weeks into the course students are confronted with dissonance between their personal construct of the subject and the reality of the discipline as taught at university, causing them to disengage, drop out or change course.

Children are first introduced to Archaeology as part of Key Stage 2 History, where the Greeks and Romans are popular curriculum elements. Although Archaeology GCSE and A2 qualifications exist, few schools offer these and they are not a requirement for university entry. The likelihood is that young

people with an interest in the ancient world construct a personal concept of Archaeology as a form of professional practice based on information from local museums, sites and societies, as well as books, TV shows, films and the internet. Although there are many excellent materials out there, the portrayal of Archaeology as a discipline in some of the latter media mentioned can be dubious. Narratives about the past can be colourful, engaging and often surprisingly well-informed by archaeological research but lack detailed explanations of scientific methods or theoretical approaches. It is precisely these methods and theories that students confront head-on when they arrive at university to study Archaeology.

Standard university induction procedures often explain to students how, where and when they will be studying, but not what. Practising academics are often immersed in the culture of their own discipline and may appear dismissive of students’ personal concepts of the subject. It therefore behoves us to induct students both into the practical aspects of life on campus and also into the intellectual culture of the discipline. We need to share with them as future practitioners the disciplinary understanding of what it is we do and make explicit the implicit principles by which we operate.

An illustration of an early intervention that addresses this issue is provided in the box.

From the Shock Absorber toolkit: Crossing the threshold into Archaeology

Pre-entry:

All registered students are sent a complimentary copy of *Archaeology: A Very Short Introduction* (Bahn, 2000) with their welcome pack. A slip inserted into the book indicates that this will be useful for their first tutorials and assignment. Students are also guided to a Facebook site for newcomers to meet each other and discuss the book.

Weeks 1 and 2:

Students attend 'Learning Cafés' to follow up their reading of the short book and guide them towards their first assessed essay: 'What is it that archaeologists do? What principles guide their work?'

Learning Cafés provide a social setting for small discussion groups. The student Common Room is arranged 'cabaret style' and discussion takes place in groups of c.5 over coffee and muffins. After ten minutes each table presents its ideas on a given question to the room. Participants

circulate to mix up the table groups and the new groups form to discuss the next question. At the end of the session everyone in the room has worked with everyone else to formulate collective essay-plan style answers to the questions posed.

The topics for the sessions are:

- Week 1:
What is Archaeology, its ethics and practice?
- Week 2:
Discussion of first assignment and essay-writing tips

Week 3:

Students have their first formal academic tutorial in small groups. The topic for discussion again includes the nature of Archaeology.

Week 4:

Students submit their first essay. Prompt feedback is provided by their tutor. This first essay and its feedback is formative towards the next, bigger assignment.

The discussions introduce students to a number of important threshold concepts that are central and unique to the study of Archaeology. The first, "Archaeology as the study of the material remains of human societies", reveals that Archaeology is *not* History – it is concerned with the analysis of artefacts, not texts. Archaeology requires students to engage with scientific, analytical methods, and this revelation may make some students feel unprepared for the course ahead. This threshold concept may also challenge their construct of Archaeology as being the cultural history of ancient societies, a popular view that is compounded by media sources.

Another threshold concept is "Archaeology as destruction". Within the archaeological community of practice it has long been recognised that excavation destroys what it uncovers (Wheeler, 1959). Practising archaeologists therefore have a duty to preserve the past by using non-invasive

methods of investigation, such as geophysics, using digging only as a last resort. Again, this requires students to engage with science. It can also cause them unease as they begin to realise that their subject involves destroying finite cultural resources, and is not purely a 'creative' act of discovery.

Threshold concepts are 'bounded' and it is appropriate to introduce them to students at the start of their studies as they delimit the discipline itself, for example defining Archaeology as being distinct from History. However, threshold concepts are also 'troublesome' (Meyer and Land, 2003) and can present students with difficult truths, e.g. that Archaeology is destructive. By addressing such concepts explicitly and openly in informal groups at the outset of their programme of studies, students can work through these 'troublesome' concepts as a peer group. With peer support they are less likely to experience feelings of isolation, inadequacy and confusion.

Conclusions

Archaeology is not the only subject taught in HE but not in schools where there is a popular image at odds with the reality of the academic discipline. Others include Forensic Science, Geology and Engineering. Pre-enrolment literature should address the issues raised above but choice of course may still be based on misconceptions of the discipline. The intervention outlined may prove useful to induct students from pre-arrival and through the critical first few weeks into the academic culture of their adoptive discipline, and support them as they experience dissonance between their personal construct of that discipline and academic realities. Crucially, by making explicit those 'troublesome' threshold concepts and discussing them in informal social environments, students can be helped to work through this dissonance with the support of their peers.

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First-year assessment: aligning perceptions and practice with purpose

Ruth Pickford, Janice Priestley and Mandy Asghar

National Student Surveys indicate that assessment and feedback across the HE sector are perceived as significantly less satisfactory than all other areas of the student experience. Student experiences of assessment and feedback in their first year are also critical for retention (Yorke, 2001). This project aims to improve assessment for first-year students at Leeds Metropolitan University (Leeds Met) and more widely in the following ways. First, we aim to close the gap between students' pre-entry expectations and their perceptions of assessment/feedback during their first year. Second, we aim to raise student and staff awareness of the purposes of assessment/feedback and disseminate techniques to help staff achieve better student engagement with assessment/feedback. Lastly, we aim to elicit student and staff perceptions of assessment/feedback before, during and after the first year to inform the redesign of practice.

The overall aim of the project is therefore to align expectations, perceptions and practice more closely to enable us to understand how we may improve the student learning experience.

The underlying principles

Nicol (2008), building on findings of the Re-Engineering Assessment Practices project (REAP, 2007), and drawing on the QAA Code of Practice on Assessment (QAA, 2006) recommends 12 principles of good formative assessment and feedback practice in the first year:

"Good assessment and feedback practice should:

1. Help clarify what good performance is (goals, criteria, standards)
2. Encourage 'time and effort' on challenging learning tasks
3. Deliver high quality feedback that helps learners self-correct
4. Provide opportunities to act on feedback (to close any gap between current and desired performance)
5. Ensure that summative assessment has a positive impact on learning
6. Encourage interaction and dialogue around learning (peer and teacher-student)
7. Facilitate the development of self-assessment and reflection in learning

8. Give choice in the topic, method, criteria, weighting or timing of assessments
9. Involve students in decision-making about assessment policy and practice
10. Support the development of learning communities
11. Encourage positive motivational beliefs and self-esteem
12. Provide information to teachers that can be used to help shape their teaching."

(Nicol, 2008, pp. 6-7)

In order to facilitate wide-scale pan-university engagement with the principles they were refined by the project director to ten elements of successful first level learning which can be represented and remembered by means of a simple **FIRST LEVEL** principles list:

- | | |
|----------|---|
| F | Friendships |
| I | Interaction and dialogue |
| R | Reflection and building on feedback |
| S | Self-belief |
| T | Teaching shaped by assessment |
| L | Lifelong learning skills |
| E | Efficient, value-added marking |
| V | Valued diversity reflected through choice |
| E | Engaging and enjoyable |
| L | Learning through experimentation |

These elements have been further grouped into four areas of focus for supporting first level learning:

Feelings: to provide appropriate social experiences to instil a sense of belonging:

Friendships: Designing assessments that provide opportunities to develop peer friendships, student-tutor relationships and learning communities

Self-belief: Providing feedback in a way that encourages positive motivational beliefs and self-esteem

Fit: to empower students to develop a sense of control over their own learning:

Teaching shaped by assessment: Using assessment diagnostically to shape teaching

Interaction and dialogue: Regularly giving and receiving individual feedback to clarify

what good performance is and what student perceptions are

Valued diversity reflected through choice:

Working in partnership with students to design assessments, giving choice in the topic, method and criteria and flexibility in the timing of feedback and assessments

Formative activity: to support learning and the development of academic skills:

Reflection and building on feedback:

Building in opportunities for students to use feedback shortly after receiving it, to reflect on learning and to close the gap between current and desired performance

Lifelong learning skills: Designing assessments that develop underpinning skills for lifelong learning

Fun: to engage students in learning:

Efficient marking: Designing assessments that are non-onerous to mark and manage and that have a positive impact on learning

Engaging and enjoyable: Focusing on engaging students through enjoyable assessment tasks

Learning through experimentation: Designing assessments that are challenging and that encourage students to take risks in a non-threatening environment and learn through failure.

The basic premise of the First Level Assessment and Feedback Project (FLAP) is that through engagement with these principles in our assessment and feedback practice we may impact significantly on the first level learning experience. The principles are being used as a framework to:

- develop staff and student resources produced as part of this project
- stimulate discussion with Leeds Met students and staff
- change Leeds Met practice.

Methodology

The study is adopting a co-ordinated, informed, University-wide response to the issues (Figure 1).

Progress to date

Surveys

The first stage was to develop questions, as part of the preliminary study, to allow us to survey students to determine their perceptions upon starting at university. The questions were designed around the FIRST LEVEL principles and sought to determine their thoughts on what first level assessment should and would be like.

We also needed to determine what the current assessment practices are at the first level. A survey for staff was designed, again using the FIRST LEVEL principles, to determine what staff believed was happening in their area and also the extent to which they agreed with the FIRST LEVEL principles. Care was taken to ensure that the staff survey was presented in a non-judgemental manner which allowed staff to be open and honest about current practice in the area where they worked. It did not specifically ask about their personal assessment practice.

In addition to surveying students and staff, a number of meetings have been held with Student Liaison Officers and the Students' Union to seek their assistance in identifying any assessment areas that students identify as being problematic.

Project website

We have established a project website to disseminate information about the project. The site contains details of the project aims and also has reflections from students about assessment:

www.leedsmet.ac.uk/flap

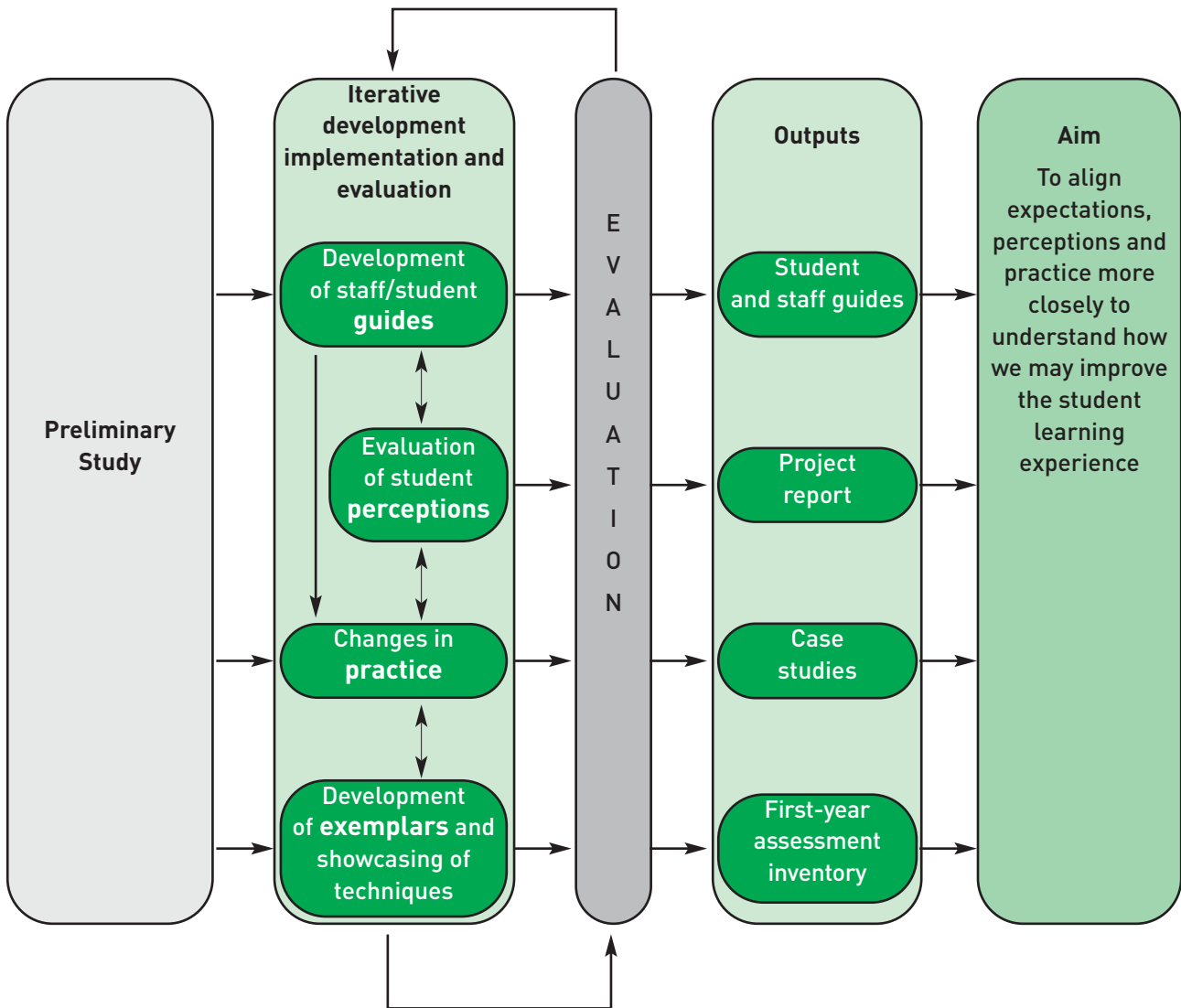
Coaching staff

A series of coaching sessions on designing first-year assessment is underway to assist staff in re-designing their assessment in line with FIRST LEVEL principles or to discuss ideas relating to assessment practice. It is anticipated that this will result in exemplar case studies illustrating good assessment and feedback practice from across Leeds Met being made available on the FLAP website.

Developing guides

Two students have been recruited to support the project and are engaged to work in developing a guide for pre-entry students to give them advice on

Figure 1: Methodology



what to expect from first level university assessment. They will seek feedback on this, prior to publication, from students in partner schools and colleges.

Collaboration with partners

We are working collaboratively with Skipton Girls' High School to explore the mentoring of students in schools in making the transition from school to university.

Lessons and challenges

Early lessons from the project are possible limitations in the student survey questions. For example, a question on whether one assignment should link to another to allow students to build on

existing skills caused some students to wonder whether poor performance in one assignment would be carried through, to their detriment, in subsequent assignments. This perception was not foreseen when compiling the questions. Also, in seeking to avoid students automatically selecting the obvious answer, some questions were asked in the negative. Where this occasionally produced a response that was perhaps not anticipated, e.g. that assessment should not be fun, we cannot be truly confident that the students had seriously read and considered their answers.

Positive aspects of the approach taken include the simple FIRST LEVEL mnemonic and the keynote

address given at the Leeds Met Staff Development Festival in 2008 to a significant number of academics, which launched the project and has successfully raised its profile within the University. The integration of first-year assessment and feedback into Leeds Met's assessment, learning and teaching (ALT) strategy and the institutional ALT priorities has been valuable in promoting discussion about the project at senior levels.

The challenges of the project at present are two-fold:

1. Identification of modules where improvement would have significant and early impact upon the student experience
2. Engagement of current Leeds Met students in the mentoring of pre-entry students.

Prosser (2005) argued that:

"Students on a course experience the same teaching and the same course, but they experience them in different ways. Becoming aware of those differences, and trying to understand them, is the key to improving students' experiences of learning. The issue is then how to bring students' experiences into line with the ways in which we design and teach our courses."

It follows that the distinctive contribution that embedding this project will make to the student learning experience is to focus both on helping first-year students to understand assessment/feedback practice and also to address the way staff assess and feed back to first-year students. Students are more likely to drop out of university in their first year than at any other time. Our work seeks to prevent attrition, not just so that we meet targets, but to avoid the long-lasting human costs to the individuals concerned.

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Developing teaching in research-intensive environments: implications for teaching-intensive universities

Graham Gibbs

The National Teaching Fellowship project reported in this article concerned how teaching can be supported and developed in research-intensive universities. Despite research-intensive universities being distinctive in some ways, a number of common themes emerged which seem likely to be relevant to any attempts to develop a whole institution's teaching. In particular, the project highlighted the importance of departmental leadership of teaching, of career structures that make leadership of teaching a credible and rewarding career option for academics, and of developing collegial departmental communities that value and discuss teaching and work co-operatively across a whole degree programme. Bureaucratic and corporate approaches (McNay, 1995) to developing teaching were not found to be associated with excellence.

The project

I drafted my National Teaching Fellowship Scheme project proposal at a time, in 2003, when I was moving to the University of Oxford to become director of the Oxford Learning Institute. I had spent nearly 30 years in various teaching development roles in teaching-intensive institutions, and been involved in national initiatives concerning institutional learning and teaching strategies (e.g. Gibbs et al, 2000). However, I suspected that most of what I knew about how to develop teaching was going to be of little use to me at Oxford. I needed to inform myself about how it might be possible to value and emphasise teaching quality, and to invest productively in developing teaching, in institutions that had to be ruthlessly single-minded about their research if they were to retain their world rankings, their status and their income. I used my project funding to find a dozen universities round the world that appeared to emphasise both their research and their teaching – they were the research élite either in the world (such as MIT, Princeton, Oxford and Stanford) or in their country (such as Helsinki, Oslo and Utrecht), but they also had a record of paying attention to teaching in interesting ways. I visited them and interviewed their senior management responsible for teaching quality and the 'developers' responsible for improving teaching. I was trying to understand the teaching development mechanisms they used, where they originated from, and what

was believed to be effective. What I found was that different institutions used extraordinarily different mechanisms and also that some did not use mechanisms at all, but worked hard to maintain a well established culture that valued teaching.

It came as a surprise to find that several of these institutions were not only top in their country for research, but top for teaching as well. There is no simple relationship between research excellence and teaching excellence (Marsh, 2007), as illustrated by Harvard's public admission of poor teaching in 2006 and by the Open University being ranked first for teaching in England.

The next step involved setting up a network of these research universities and inviting teams of two – the equivalent of a Pro-Vice Chancellor (Teaching) and the head of 'teaching development', one policy developer and one practice developer – from each institution, to a three-day residential meeting in Oxford at the project's expense. Everyone agreed to come and the meeting consisted largely of institutions taking turns to explain how they supported teaching while everyone else stared in open-mouthed astonishment at what they heard. For example:

- Sydney has parallel career structures, right up to full Professor, for those who emphasise teaching, for those who emphasise research, and for those with a balanced portfolio, with explicit definitions of what you have to achieve at each of five career levels. It also has mechanisms for providing more funding for teaching, for its development, and for pedagogic research for those faculties that perform better.
- Oslo has a substantial teaching award not for the best teacher but for the best 'learning environment', rewarding collaboration between teachers across an entire degree programme.
- The Provost at Stanford personally vetoes departmental appointment and tenure decisions if he cannot see sufficient evidence of excellent teaching in job applications.
- MIT is entrepreneurial about developing structures within which it is easy and attractive for departments and teachers to 'opt in' to developments. For example 80% of its undergraduates, across every subject area, have first-hand experience of working as a kind of

intern in a real research project, often in their first year. The offers of such research opportunities come from individual academics but the system is administered centrally (Bergren et al, 2007).

- Utrecht identifies those it would like to see in positions of influence in teaching in the future, and puts them through a programme that grows educationally and organisationally sophisticated change agents. Many graduates of this programme end up as heads of department or programme directors.
- Helsinki hired a very large team of curriculum development experts to help departments to implement the Bologna Process, turning very traditional content-led curricula into outcomes-driven curricula across the entire university, and then researched the consequences (Lindblom-Ylänne and Hämäläinen, 2004).
- Oxford has increased by a factor of ten the number of teachers voluntarily involving themselves in teaching development programmes each year by organising this on a discipline-specific basis and putting most of its central resources, funding and expertise into supporting devolved implementation by high status disciplinary academics rather than by low status generic 'developers'. Similarly Copenhagen and Lund have Faculty-specific teaching development units.

Leadership of teaching

In research universities, departments are usually highly autonomous, and it became clear through discussion that many significant developments in teaching emerge from initiatives within departments which may then be picked up and spread with the support of the centre. However, the centre itself is rarely successful in initiating changes in teaching. In most cases, initiatives could be traced back to an individual, often a head of department or programme director. The network of research universities that the project had set up decided to seek funding for a research project that identified the best two teaching departments in each of the network institutions and then undertook detailed case studies to find out what role, if any, leadership had played in creating teaching excellence in these departments. The Leadership Foundation and the Higher Education Academy jointly funded the study. Twenty-two departments

round the world were visited by three researchers and a number of patterns emerged from these case studies (Gibbs et al, 2007).

The most obvious conclusion was that while leadership of teaching was usually very important, there was no one way to achieve excellence. Also, while some achieved excellence through a huge range of leadership activities and planned strategic interventions, others achieved undeniably wonderful teaching without strategic leadership or even any overt attempts to develop teaching, largely culturally and through carefully nurturing and maintaining values associated with teaching. For example one department displayed 46 of the leadership activities that were identified across all case studies while another displayed just five (Gibbs et al, 2007), but the one that displayed five took great care to appoint new academics who "valued young people and their development as scientists" and then just let them get on with it (England, 2007). The role of the head was to maintain the culture. I visited the department and the students thought it wonderful. It had outstanding teaching ratings at both undergraduate and graduate levels and was ranked first nationally for teaching in its subject. The crucial point here is that this was not achieved by 'educational development' nor indeed by any planned or strategic process. Leadership was 'distributed' (Bolden et al, 2005) rather than residing in one person.

It also became obvious that contexts differed enormously even within the same institution. This parallels the phenomenon evident in National Student Survey scores that subjects within an institution can differ from each other more than institutions differ from each other. In terms of teaching quality it is the department that makes most difference. It was found that Humanities departments achieved excellence in quite different ways from science departments and both were different from professional subjects. Unless the department faced a very serious problem that had to be tackled there was little chance of academics accepting, or helping to implement, planned strategic change. Emergent change happened when there were fewer pressing problems. Only one institution could claim to have convincing evidence that central planning had achieved anything other than creating an environment within which

departments were more likely to flourish in their own idiosyncratic way.

Conclusion

The range of strategies and tactics being used to develop teaching in each network institution was summarised and each institution's efforts were categorised in relation to the summary (Gibbs, 2005). Ideas on how to develop teaching were shared on a password-protected website for the sole use of the network. Utrecht offered to host a meeting in 2006. Oxford were the hosts again in 2007, Helsinki in 2008 and MIT in 2009. By the time the formal project ended it was a self-sustaining network with substantial momentum. Examples of successful leadership of teaching and case studies of successful teaching departments, together with materials to support workshops for heads of department, have been produced for the Leadership Foundation (Gibbs et al, at press).

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Leading, promoting and supporting undergraduate research in the new university sector

Peter Childs

Project

Several colleagues at the University of Gloucestershire made a successful bid in summer 2007 on the subject of 'Undergraduate research in the new university sector' to the inaugural call for the Higher Education Academy's National Teaching Fellowship (NTF) Project scheme.

Alongside a project research assistant, Wendelin Romer, I act as one of the co-directors, in tandem with Mick Healey, supported by a team of colleagues: Kris Mason O'Connor, Carolyn Roberts, Kenny Lynch, Chris Short, Lindsey McEwen, and our project evaluator Phil Gravestock. We work collaboratively as a team, meeting monthly and following a tight timetable which has several discrete but interlinked work packages parceled up among subsets of the team. Our project aims to identify transferable practices and inform policy to enhance the student experience at institutional and national levels. As well as analysing and disseminating practice that falls under the general definition evolved from our inclusive understanding of research in all undergraduate years, the project additionally addresses two of the sector's priority areas: the student learning experience and academic leadership.

Background

Our working definition of undergraduate research includes Boyer's (1990) scholarships of discovery, integration and application (engagement), and is characterised by breadth: 'undergraduate research' describes student engagement from induction to graduation, individually and in groups, in research and inquiry into disciplinary, professional and community-based problems and issues, including involvement in knowledge exchange activities.

The concept and practice of undergraduate research is well established in the United States (e.g. see Seymour et al (2004), NSF (2006), Kinkead (2003), Kaufman and Stock (2004) and the work of the Council on Undergraduate Research: www.cur.org/). It is also prominent internationally in the Honours dissertation, and at many research-intensive universities across the world (e.g. the National Reinvention Center at Miami University focuses on undergraduate education at research universities: www.sunysb.edu/Reinventioncenter/),

but the project team agreed that there is scope for more analysis of work being undertaken in the UK post-92 higher education sector (building on, for example, Jenkins (2004) and Jenkins and Healey (2007)).

We felt that our project would also build on and expand work from our own institution that was contributing to discussion and understanding within Gloucestershire University, including: inter-Faculty co-operative projects to develop and evaluate students' experiences of undergraduate research; increased student participation in research projects; inclusion of undergraduate research in the curriculum of our nationally-accredited Postgraduate Certificate in Higher Education, which all new academic staff undertake; participation in the Carnegie Scholarship of Teaching and Learning programme on Undergraduate Research (CASTL); and institutional webpages containing guidance on undergraduate research for staff and students.

Methodology

The project includes several strands of activity: an analysis of new universities' research-informed teaching (RiT) statements, policies and practices; an inter-university benchmarking exercise on research-teaching links; a review and analysis of approaches to the leadership of undergraduate research in North America; and the identification and development of ten case studies to illustrate the range of ways in which English 'new' universities are fostering undergraduate research.

First, given the opportunity offered and impact felt in the post-1992 sector of the research-informed teaching monies the Higher Education Funding Council for England (HEFCE) has set aside for three years for non-research-intensive institutions, we wished to undertake an inquiry into how new universities were framing and phrasing their research-informed teaching statements and policies, as well as looking for evidence of undergraduate research activity in practice. This ongoing analysis has produced a fascinating snapshot of new and renewed effort that has surfaced in diverse institutional-level documentation focused on Teaching Quality Enhancement Fund (TQEF) plans under the RiT Initiative, but also including research strategies, for example.

Also, following the example of an innovative benchmarking exercise in Australia, the project is conducting an inter-university comparison of research-teaching links. We are therefore in the process of completing phase 1 of the exercise between the University of Gloucestershire and another new university in England, using the template developed by Monash and Sydney Universities in Australia (Brew and Weir, 2004). In preparation for this, the University had established a working group in 2006 to identify appropriate examples of linking teaching, research and knowledge transfer. The group reviewed areas within the University for institutional, departmental, and discipline-based strategies and practices to benefit student learning. The subsequent report included a recommendation that an audit be conducted at institutional and Faculty level to determine suitable strategies, disseminate good practice and propose areas for development with regard to strengthening and enhancing linkages, including the promotion of undergraduate research.

Thirdly, in collaboration with the University's Centre for Excellence in Teaching and Learning, the Centre for Active Learning (CeAL), we are undertaking a review and analysis of approaches to the leadership of undergraduate research outside the research-intensive universities in North America. This is enhanced by our involvement with the Carnegie (CASTL) Leadership programme, where we are part of a consortium discussing approaches to the leadership of undergraduate research. These US case studies are being written up as examples of Stateside practice for sharing via the University website and they will also contribute to another of the project's outputs, which will include a three-part guide to the promotion and leadership of undergraduate research at institutional, departmental and course level.

Assisted by CeAL and the University's Pedagogic Research and Scholarship Institute (PRSI), we held a swapshop at Gloucestershire in May 2008 which was attended by participants from nearly 30 new universities. This was an excellent event from the point of view of sharing and networking but it also helped the project in identifying and developing another strand: the gathering of information on innovative practices to illustrate the range of approaches through which English 'new'

universities are fostering undergraduate research. Our aim here is the identification and development of ten case studies to chart the spectrum of ways in which UK HEIs are leading and promoting undergraduate research, and how they are implemented in departments and disciplines.

Finally, we are also in the process of trialling and evaluating three undergraduate research initiatives discovered during the project at Gloucestershire. These will clearly provide some further first-hand experience of the transferability of innovative practice in undergraduate research. The results of this and the other strands of the project outlined above will be detailed in our final report but we hope real benefits to the sector will also lie in the encouragement of and impetus to the undergraduate student research experience.

Conclusions

The project will run until the end of the 2009-10 academic year but has already highlighted for us innovative and exciting practices across the sector. It is clear that considerable activity was in place on undergraduate research before the research-informed teaching monies were allocated, but it is also apparent that considerable new efforts and initiatives have arisen from this innovative, targeted funding source. The project team hopes that it is both bearing witness and contributing to a sector-wide development in perceptions and practices in this area, not all utilising the term 'undergraduate research', but all focusing in a variety of ways on enquiry-based activity that supports active learning approaches, with students participating as scholars.

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Professor Peter Childs

Dean of Research

University of Gloucestershire

Doctoral learning journeys: supporting and enhancing doctoral students' research and related skills development through research evidence-based practices

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This project investigates how doctoral students make 'learning leaps' to recognise and cross conceptual and skills thresholds in their research and ways in which they can be best supported to do so. It responds to current national and international concerns about the nature of the doctorate, its purpose and value for different stakeholders. The research takes place in a number of UK universities, representing differences in the sector. It aims to (a) explore and conceptualise the nature of doctoral students' learning during research and skill development; (b) examine and enhance the practices of supervisors and examiners in order to support and assess students' learning. The project will both create new conceptual and factual knowledge about doctoral student learning and supervisory practices, and produce printed and electronic materials to support students and supervisors.

Introduction

Research into threshold concepts in the disciplines has largely focused on undergraduate students' learning (Meyer & Land, 2003; 2005; 2006), while latterly our own parallel research has started to identify threshold concepts and conceptual thresholds at the research education level; postgraduates' experiences with threshold concepts and conceptual threshold crossing; and supervisors' experiences of identifying conceptual threshold crossing and 'nudging' students across.

The NTFS project 'Doctoral Learning Journeys' (2007-10) builds on this ongoing research, exploring conceptual threshold crossing more generically in doctoral learning, identifying supervisor and examiner awareness of this and strategies used to 'nudge' students into more conceptual, critical and creative levels of work.

Theoretical background

Our thinking is influenced by research into linkages between teaching and learning and developing supportive academic communities of practice (Lave and Wenger, 1991), meta-learning (Flavell, 1979) and the threshold concepts research of Meyer and Land (2003; 2005).

We argue that research at the doctoral level has critical points when students make 'learning leaps',

moving work beyond descriptive fact-finding to conceptual levels of understanding. These 'aha' moments represent moves beyond their comfort zones where students acquire new ways of seeing their research. They experience conceptual paradigm shifts regarding their research and themselves.

Meyer and Land's (2003) notion of 'threshold concepts' encapsulates such 'new ways of seeing'. They identify core learning outcomes with examples from pure maths (complex numbers; limits); literary studies (signification); and economics (opportunity cost). Their evidence shows that a threshold concept is likely to be:

- *'transformative'* – leading to significant, probably irreversible, shifts in perception
- *'integrative'* – exposing previously hidden interrelatedness
- *'bounded'* – bordering into new conceptual areas
- *'troublesome'* – conceptually difficult, counter-intuitive or alien.

Students passing through the 'portal' opened by a threshold concept experience change in their use of symbolic language, understanding of their discipline and conceptual appreciation of research issues. Threshold crossing also involves a state of liminality, whereby students 'strip away' the old and pass into the new. However, they may be stuck in this liminal state between older understandings and new appreciation of concepts (Meyer & Land, 2005). Some become frustrated, losing confidence or dropping out (Meyer & Land, 2005; Trafford, 2007).

At the doctoral level we have identified and explored both discipline-specific threshold concepts and generic conceptual thresholds. We argue that doctoral conceptual threshold crossing includes:

- ontological shifts – security of self and identity in the world is challenged
- epistemological shifts – knowledge is problematised and deepened.

Kiley and Wisker (2008; 2009) and Wisker, Kiley and Aiston (2006) have explored supervisory strategies that empower doctoral students to cross conceptual thresholds at various stages in research. Trafford (2007) examined difficulties doctoral students encounter in acquiring and using conceptualisation.

Since confidence in handling conceptualisation is central to doctoral-level work, this itself represents a 'threshold concept' (Leshem and Trafford, 2007).

Methodology and methods

Quantitative and qualitative approaches are combined in four research stages: Stage A comprises a large-scale survey of doctoral students, investigating their learning processes, experiences and development; Stage B maps individual learning journeys of 16–20 doctoral students through narrative interviews and journaling; Stage C involves semi-structured interviews with doctoral supervisors, examiners and research programme leaders; Stage D develops theoretical models and resource materials relating to supervisory strategies, e-learning environments and written texts to support doctoral students' learning and scholarly progression.

Early data and findings

To date we have conducted the survey, recruited students from a range of universities across the UK, begun a process of interviewing at regular intervals which will continue into 2010, set up opportunities for journaling and begun recruitment of supervisors.

Analysis of both the survey and narrative interviews identifies student awareness of beginning to work at a more conceptual, critical, creative level in their doctoral studies, although for many in their first year, this is often couched in terms that express a preliminal state. The survey identified ways in which doctoral students indicated crossing conceptual thresholds:

- **Discovery** – the identification of a new theory, theorist or concept that encapsulates thinking
- **Synthesis** – the bringing together of two or more concepts to create a new concept
- **Verbal** – the discovery of new ways of thinking as a result of discussion or the recognition of knowledge sufficient to defend a position
- **Mechanical** – almost superficial adoption of a conceptual position to satisfy requirements of the discipline
- **Innate** – 'I always thought this way'.

In both the survey and interviews, doctoral students use a variety of metaphors to describe learning

journeys and experiences. Learning leaps are often described metaphorically, in visual terms ("a lightbulb moment") or kinaesthetic terms ("things clicked into place") as are moments where students feel they are stuck, e.g. "I hit a brick wall". Learning moments where students indicate conceptual threshold crossing may occur when they:

- identify research questions
- determine relationships between existing theories and their own work
- devise methodology and engage with methods
- analyse data
- reach conclusions, conceptual as well as factual.

Discourse analysis is revealing ways in which doctoral students begin to signify and articulate their awareness of working conceptually or experiencing 'learning leaps'. Learning moments may be experienced as a major ontological or epistemological shift or as a series of moments, for example when different aspects of the theoretical or methodological framework fall into place.

“ In terms of learning moments I think you have those small or medium moments every now and again, don't you, when you read and you are exposed to new ideas and you think ah now, I've got it and then actually a couple of weeks later you're a bit further but then you have another one of those moments and so you kind of gradually ... get closer and closer to the final thing, the final shape of your theories and ideas about it. ”

2nd-year Philosophy student

Interviews are revealing practical strategies which aid conceptual threshold crossing. Beginning the process of defending work to supervisors and the wider research community can be crucial. The importance of questioning by supervisors is encapsulated in this example where a student experienced a conceptual shift while preparing to present a research outline:

This example indicates experiences of conceptual threshold crossing, including a transformation of

“ A couple of weeks ago I found that things have stopped ... mentally I found myself up against a brick wall ... I just felt that I was kind of stuck and it wasn't moving and it was all bitty, I'd done all these chunks of work but I couldn't really see how they fitted together and ... so I reached quite a crisis point. Especially when I got negative feedback I just felt quite down hearted about it and ... having the supervision, talking it through, taking a step back from everything, ... taking it to bits and being questioned about everything and then having to simplify everything, in order to present. I mean over a couple of days – my supervision was one day and my presentation was the next day...

I came out of that whole process feeling that I could kind of see it, I could see that there was shape there ... ”

1st-year Gender Studies student

understanding which is simultaneously troublesome and accompanied by an initial loss of confidence. However, the supervision enabled the student to 'take a step back' from the research and begin to clarify their work in order to justify it to their peers. The survey and interview data so far indicate student responses to such conceptual threshold crossing in terms of initial discomfort or uncertainty, heightened confidence as researchers, and shifts in identity. Affective language is often used to describe how students felt during this process.

Interim conclusions

The research has so far identified critical points when students make conceptual 'learning leaps', experience conceptual paradigm shifts regarding their research and themselves and demonstrate 'new ways of seeing'. However, students often struggle to articulate this experience and may benefit from developing academic language and meta-learning at this level.

Practical strategies that may enable work at a more conceptual level have been reported by doctoral students, including questioning strategies to prepare students to justify their work along with writing and presentation opportunities. Such

strategies will potentially benefit supervisors as they may indicate ways in which doctoral students can best be encouraged and enabled to make 'learning leaps' and cross conceptual thresholds, and how supervisors recognise when this is about to occur or has occurred. So far this is a very rich experience; interesting findings are emerging as the research progresses and the results should inform the development of resources and prove useful to the sector.

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Building research capacity in a practitioner network: the National Action Research Network on researching and evaluating Personal Development Planning and e-portfolio

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Introduction

The national action research network on researching and evaluating Personal Development Planning and e-portfolio (NARN-PDP) is a National Teaching Fellowship Scheme project with some significant defining characteristics:

- It is a large network project involving 16 higher education institutions (HEIs) *
- It is a practitioner-led network focused on researching aspects of Personal Development Planning (PDP) and e-portfolio
- It aims to produce both a community of practitioner-researchers and publishable research outputs
- Impacts on student learning are through the improved capacity of the whole practitioner community to understand and develop practice in supporting student PDP and e-portfolio use.

The NARN-PDP project is at its mid-point, running from autumn 2007 to July 2010. This paper provides an outline of the context and challenges that have faced the project to date, and a brief overview of what has been learnt through progress so far. We believe that the model used by this project is a powerful one which could be adopted by other groups to build research capacity, achieve greater understanding of practice and enhance the student learning experience. As such this project has great potential for broad impact on the sector.

The context: a practitioner network supporting the implementation of PDP and e-portfolio

The practitioner network at the heart of this project is made up of members from a diverse set of backgrounds, with differing levels of experience, expertise and interests. The one area that all the practitioners have in common is some responsibility for supporting the implementation of student PDP within their own institutions. They also share a willingness to discuss their practice openly with colleagues from other HEIs and an enthusiasm to improve that practice in an evidence-informed way. The network has been drawn from the existing national network, the Centre for Recording

Achievement (CRA). This pre-existing network has proved to be key to this project in providing the basis for the project network and in facilitating our collaborative activity and dissemination.

The introduction of student PDP in UK HE is a unique attempt to enhance and capture student learning by sector-wide agreement (Jackson & Ward, 2004). The agreement defined PDP as “a structured and supported process undertaken by an individual to reflect upon their own learning, performance and/or achievement and to plan for their personal, educational and career development” (QAA et al, 2001). Many institutions chose to use e-portfolio systems as one means of supporting student PDP (Strivens, 2007).

The challenge: practitioners and the need for an evidence base

Consultation work by the CRA for the Higher Education Academy found that a key concern amongst practitioners was the paucity of the evidence base for their work (Ward et al, 2005). There have been repeated calls for more robust evaluation of PDP in the UK (QAA et al, 2001; Burgess, 2004; Clegg, 2004; Gough, 2003). The project seeks to address this through capacity building of practitioners as researchers, developing their confidence and capability to produce their own research base in relation to PDP and e-portfolio for students. The challenge for the project is that NARN-PDP project members have differing levels of experience, only some members having experience of undertaking formal research; in many of these cases, the research was not educational in focus.

The project: capacity building through participant action research on research

Capacity building for research engagement among this PDP practitioner network particularly lends itself to a participant action research model because there was already a strong, national practitioner network in the CRA. This network has developed over time many characteristics of a “community of practice” (Wenger, 1998) with shared values including an emphasis on the positive agency of the committed practitioner. This chimes

well with Reason and Bradbury's suggestion that "action research is an inherently value laden activity, usually practised by scholar-practitioners who care deeply about making a positive change in the world" (Reason & Bradbury, 2006). The value-laden nature of this definition is echoed by Senge and Scharmer's definition of capacity building as "enhancing people's awareness and capabilities, individually and collectively, to produce the results they truly care about" (Senge & Scharmer, 2001).

The adopted project methodology is a form of participant/community action research at the overarching, meta-level of sharing and developing research plans and outcomes among colleagues. In practice each individual NARN-PDP participant is developing and implementing a research project on a key aspect of PDP implementation at his or her own institution. The plans are being shared, analysed, evaluated and sharpened at regular regional network meetings. The action research interventions (Argyris & Schön, 1991) are taking the form of considered improvements in the plans developed through this iterative process and more formal inputs to annual national network meetings at the stages of research design, data gathering, data analysis and reporting. The emphasis throughout is upon sharing good practice and working collaboratively at all stages of the research process.

The overall project is seeking to establish whether this form of participant action research on research planning is an effective means of research capacity building. The key criteria here will be whether all participants are confident and able to produce publishable outputs. The individual institutional representatives are sharpening their research plans and aiming to produce at least one piece of publishable research on their PDP practice. The collation of these research outputs will make a significant contribution to our understanding of effective PDP implementation across UK HEIs.

Progress: lessons so far

The first period of the project was spent establishing the membership, forming the leadership team and three regional groups and developing a shared and consistent view as to the nature and purpose of the overall project. This could not be rushed.

There have been some issues of changing membership, which is to be expected with such a large project membership and over time. This created a challenge, in the first instance, in maintaining a sense of community and purpose as institutional teams formed and developed and new members were brought into the project. The project has now reached a period of consolidated and more stable membership.

The leadership team is now well established and appears to be effective in providing a central, guiding and overarching role for the project and its members. The project has important synergy with the lead National Teaching Fellow's role as Associate Director for Research with the CRA (Peters, 2006; 2007). The three regional groups have developed into highly effective support networks within which research progress and personal development journeys of members are being shared, with the guidance of all three regional leaders.

Levels of trust and support across the regional teams have developed and are exemplified by the way in which teams are able to act as critical friends to each other, asking probing questions and offering support. The success of the regional groups has been fundamental to the whole project's success. After one year, there is evidence that members have 'moved on a step' and developed in confidence and the capability to undertake and further their research.

An unintended consequence of the original project proposal is that the institutional members (through their participation in the NARN-PDP project) are developing research capacity within their own HEIs as research teams/groups have formed internally around the national project. In one HEI the national action research network model has been adopted internally to develop an action research approach, inviting academic staff to evaluate (e)-PDP implementation across different subject disciplines.

Early on in the project a NING social network site (<http://about.ning.com/>) was set up. This has had a mixed response and 'patchy' engagement. To encourage broader engagement with the NING site 'diarised' meetings have been organised on NING, with a specific discussion topic relating to the project. This has proved more successful and the

leadership team will be developing this. We anticipated that communication processes and systems would be a challenge with a network project of this size and we will seek to evaluate the success or otherwise of the NING communications site throughout the project lifecycle.

There has also been a challenge in keeping a balance between implementing the project timetable as planned and responding sensitively to the natural flow of participant action research. It is in the nature of participant action research that it should be driven by the community and not by a pre-set project plan (Argyris & Schön, 1991), and this can cause tensions. However, so far it has proved possible to respond to participant requests and ideas and still work within the overall project structure.

The NARN-PDP project centres on developing the capability and capacity of researchers. There is growing evidence that the intended capacity building is working. Network members are challenging themselves to move into new aspects of research and are using the supportive atmosphere of the network to guide them through this. Members are also demonstrating a willingness to 'push at the boundaries' and taking themselves out of comfort zones in their research.

The overall project offers a blueprint for capacity building through participant action research which could be utilised effectively by any HE community. The commitments it requires are the willingness to find time to meet, to be open about plans and to learn from peer feedback. The project has already done much to move a successful practitioner community towards engagement in practitioner-led research. Participants have developed research questions and plans that are robust enough to generate publishable outputs. The result will be a greatly enhanced evidence base for PDP implementation across UK higher education.

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Northern – Bradford, Bolton, Liverpool, Salford,
UCLAN and Newcastle

Midlands – Bedfordshire, Birmingham City,
Coventry, Wolverhampton, Worcester and
Gloucestershire

Southern – Bournemouth, Exeter, Portsmouth,
Canterbury Christ Church [and Kent]

Project website:

recordingachievement.org/narn/default.asp

ELPSS: e-learning in Physical Science through sport

Robert Lambourne

Background

e-Learning in Physical Science through Sport, the ELPSS project, is one of the first generation of institutional education projects supported by the project strand of the National Teaching Fellowship Scheme. Its main aim is the creation of a large number of free-standing interactive teaching packages that will introduce a wide range of important ideas in the Physical Sciences (Physics, Chemistry and Materials Science) using examples taken from the world of sport. When completed, the teaching packages will be made freely available to the entire HEFCE-funded sector as reusable learning objects (RLOs) that can be incorporated into lectures, courses, and programmes. The intention is that the packages will be sufficiently interesting that students will find them more engaging than conventional approaches, and that lecturers will find them sufficiently effective and easy to use that they will employ them in preference to developing their own materials or buying others.

The ELPSS project began in mid-2007 and will be completed at the end of July 2010. This 'half-time' report describes the original intentions, what has been achieved so far, some of the lessons learned and the challenges that lie ahead.

Initial aims

The production of RLOs is at the heart of the ELPSS project but there are a number of ancillary aims that must also be met. These include the following:

- To conduct and update a national survey of the wants and needs of potential users so that we can be sure that the objects we are producing are the kind that lecturers want
- To create an Open University course for presentation in 2009 that will incorporate approximately 50% of the ELPSS RLOs so that they can be trialled with a large number of students before their finalisation and release
- To ensure that several of the RLOs incorporate an element of problem-based learning by starting from a question for which the student must acquire specific information in order to solve it
- To include some training in scientific information skills in each of the RLOs.

Progress to date

The project is making good progress on all fronts, though the demands of producing the RLOs have been significantly greater than expected.

Management of the project is mainly in the hands of Kevin Mayles, the manager of the hosting body, piCETL. An initial 'wants and needs' survey was carried out and will soon be updated. The survey showed that the most suitable medium for producing ELPSS RLOs would be Adobe Flash, a popular platform for the development of web-based interactive packages that is largely free of incompatibility problems. The results also indicated that the final RLOs could be distributed via an online repository. The survey included a number of quite detailed questions about preferred package durations and so on, but the main response was along the lines of "give us something of good quality, that works, and needs the minimum of intervention". Many of those responding had not made great use of RLOs in the past and did not have strong feelings about the form they should take.

A review of the relevant literature (Rehak et al, 2003) and discussions with others involved in the production and use of RLOs showed that there were so many definitions of 'reusable learning object' that the term could be interpreted very freely. Our decision was to accept a rather 'fat' definition of RLO as a computer-based teaching package that has a specific science learning outcome. In the case of ELPSS RLOs there would also be a high level of interactivity, an information skills outcome and one or more sporting contexts. To ensure that the science learning outcome is met, assessment would have to be included in each RLO.

Gaining approval for a new Open University course is highly non-trivial, so our first great success was getting the go-ahead for the production of OU course S172 – a 10-point, Level 1 Science course that we originally hoped to entitle "Olympic Science", though that particular title could not be used owing to trademark restrictions. Finding a title is not the only challenge S172 presents. Chaired by ELPSS team member Mark Bowden, it will be the OU's first Level 1 Science Faculty course based on an e-book rather than a printed text. Each chapter will concentrate on a single type of Olympic sport (running, swimming, jumping, diving, cycling etc), so the sequence has had

to be arranged to introduce science concepts in a rational order; one-dimensional linear motion leading to two-dimensional linear motion leading to rotation and so on. At three or four key points in each chapter students will be referred to an ELPSS RLO which will introduce the next concept they will need to understand. Ensuring the effective integration of the e-book and the RLOs remains a focus of attention.

At the time of writing, about 20 RLOs are at various stages of completion. Topics covered range from speed, acceleration, force and energy to Poiseuille flow and the interpretation of graphs. In the early stages of the project much time was devoted to creating a flexible but clear template that could be applied to the great majority of RLOs. An RLO devoted to the concept of centre of mass provides a good example of this approach. The first draft was prepared by Derek Raine of the University of Leicester, who has been included in the ELPSS team as a special consultant on problem-based learning. After some agreed modifications by other members of the writing team, the script was passed to the project's main software developer, Jianfan Xie.

Jianfan was soon able to create an 11-screen learning object that quickly posed the problem: "Why do elite high jumpers show a preference for the Fosbury flop technique?" This question is illustrated by BBC footage of an athlete using the technique. The screens that follow allow students to use a sequence of simple but increasingly sophisticated models to gather data about the energy required to jump over a barrier, taking account of the orientation of the jumper's body. This sequence makes it clear that a crucial factor is the location of the jumper's centre of mass since, for the purposes of an energy calculation, the jumper's entire mass may be regarded as being concentrated at that point. Some interactive exercises emphasise the fact that the centre of mass may be outside the object. So, by appropriate bodily flexions jumpers may ensure that their centre of mass is outside their body. A re-examination of the BBC footage then leads to the final answer: the Fosbury flop involves exactly the movements that place the centre of mass outside the body and ensure that it passes under the bar while the jumper's body passes over the bar. The technique therefore provides maximum clearance for a given input of energy.

Lessons and challenges

The search for topics for RLOs has shown that sport is indeed a rich field for interesting science teaching contexts. The greatest challenge that we face arises from our own limitations as teachers. We were determined from the outset to ensure that ELPSS RLOs would be highly interactive. Our belief in the value of this has not diminished; an enormous body of educational research literature (Laws et al, 1999) shows the advantages of active as opposed to passive learning. However, devising effective activities is hard work. It is generally much easier to find clear ways of telling students facts than it is to develop efficient methods of enabling them to discover those facts for themselves, and the new pedagogy of RLOs is extremely demanding in this regard. It should be emphasised that this is primarily a problem of design rather than implementation; we have been relieved by the speed with which our designs have been implemented.

Another challenge arises from our determination to include science information activities as natural outgrowths of student science learning in each of our free-standing RLOs. There have been many successful attempts to teach science information skills progressively in the context of a particular course, but we face the challenge of teaching some part of such a programme within each RLO without the assurance that students will have covered any other element of the programme. Our team specialist in this area, Clari Hunt, has helped us to identify an appropriate range of skills to teach and has furnished many examples of good practice.

Conclusions

The ELPSS project has provided a valuable opportunity to develop teaching resources in an interesting and engaging area. In this case the development of the resource goes hand in hand with the development of new pedagogy and the new pedagogical practice. The implementation of the RLO scripts has been remarkably trouble-free, but the creation and refinement of the scripts has taken a surprisingly long time, partly reflecting the novelty of the task but mainly owing to the great attention to detail that is required. The challenge ahead is still significant and success is not guaranteed; the next 18 months will be exciting.

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“It’s almost like a medal that you wear afterwards”: undergraduate student experiences of work-related learning in the public and third sectors

Angeliki Triantafyllaki and Catherine Smith

Introduction

Work-related learning (WRL) promotes learning across the lifespan as it involves “students learning about themselves and the world of work in order to empower them to enter and succeed in the world of work and their wider lives” (Moreland, 2005:4). Learning gained through work experience, volunteering and extra-curricular activities can have considerable impact on students’ personal development, increasing their levels of confidence in the workplace and equipping them with the skills to develop their professional careers (Ball, 2003; Drury, 2007). However, WRL in the public and third sectors, in particular, is often undervalued and separate from course activities (see also Drury, 2007). A recent study of entrepreneurial education in creative subjects (Art Design Media Subject Centre (ADM-HEA) and the National Endowment for Science, Technology and the Arts (NESTA), 2007) found that students describe their own work-related learning activities that are oriented towards cultural, social and not-for-profit activities as “entrepreneur-like”, arguing that “they demand similar skills and attributes to those needed when working in commercial sectors” (p. 58). Yet, little explicit evidence exists of the benefits to students’ learning through participating specifically in public and third sector activities, and the transferability of creativity and skills gained in both curriculum and extra-curricular work-based activities.

Creative Interventions: valuing and assessing creativity in student work-related learning in the public and third sectors

The Creative Interventions project (funded by the National Teaching Fellowship Scheme project strand, 2007-08) seeks to explore the ways in which work-related learning in the public and third sectors, encountered during a creative arts higher education, is valued and fostered by students, tutors and employers. The project aims to identify:

- the types of WRL experiences that creative arts students have in public, not-for-profit and voluntary work contexts
- the ways in which creative learning developed via HE transfers into contexts beyond the higher education institution (HEI)

- the creative agencies that enable learners to tackle challenging situations and problems in WRL contexts, and
- the ways in which student WRL experiences provided by both curriculum-based and extra-curricular activities are recognised and valued.

It is hoped that the identification of procedures for assessing and rewarding such learning, and for overcoming the inherent difficulties (i.e. assessing group or multidisciplinary work), will bring benefits for the whole HE sector.

Informed by literature on WRL, employability and creative arts education, the following concept map was developed. The cross-section in the middle represents the project’s focus of (a) students’ experiences (skills, attributes, understandings) of work-related learning activities in the public and third sectors; and (b) the role of a creative arts HE in the development of the transferability of these experiences. More information can be found at: <http://creativeinterventions.pbwiki.com>

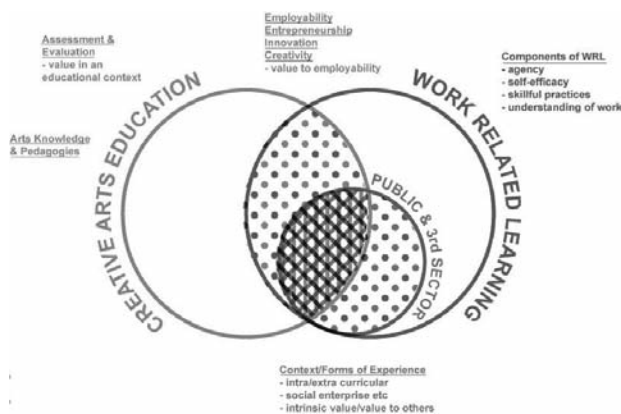


Figure 1: Creative Interventions project concept map

Research approach

The Creative Interventions project employs a mixed methods approach, combining both quantitative and qualitative components (Bergman, 2008). The aim is to provide an overview of students’, tutors’ and employers’ views of WRL activities, in addition to more detailed, illustrative examples from creative arts disciplines. During an initial qualitative phase, pilot interviews were conducted within the partner institutions that, together with the review of the literature, informed the design of the electronic survey. The survey, currently underway, investigates the perceived value to stakeholders of WRL activities,

their locations within and outside the curriculum, and the nature of assessment used to recognise and reward students' learning in these contexts.

During the second year of the project a series of in-depth institutional and disciplinary case studies (Stake, 2005) will be conducted, drawing on existing examples provided by project partners and examples identified through the survey. These will aim to examine course structures and assessment formats, student narratives of learning and engagement, tutor evaluation of issues surrounding WRL activities and employers'/host organisations' perspectives of the benefits to students. Case studies will also generate multimedia materials for students and staff, focusing on the learning outcomes of participating in such activities and ways these might be valued and recognised at individual and institutional levels.

Pilot case study: The Sorrell Foundation Young Design Programme

The Sorrell Foundation's Young Design Programme (YDP) "joins up pupils in primary and secondary schools with students at university and designers in industry" (Sorrell Foundation, 2007:2). During the six-month duration of the programme, "the school pupils act as clients by commissioning a school design project, and their consultants are students of design at a college or a university who, in turn, are mentored by professional designers and architects" (Rudd, Marshall & Marson-Smith, 2008:2). The value of the YDP lies primarily in its emphasis on developing participants' professional skills, such as teamwork, communication, problem-solving and presentation skills. More information can be found at:

www.thesorrellfoundation.com/young_design_programme.html

Previous evaluations of the programme reported that students were hungry to experience multi-disciplinary working on socially responsible live projects, as well as eager to test their design skills and theoretical knowledge on authentic 'real world' situations beyond the context of the HEI. Students articulated improved analytical, communication and presentation skills, and above all increased flexibility and confidence to deal with complex professional situations (Smith, 2008).

The aims of the YDP pilot case study were (a) to synthesise data and observations from previous reports and (b) to gather further evidence on students' and tutors' perceptions of students' learning outcomes and creative development that would also inform the design of the electronic survey. At the time of submission of this paper, collected data included audio-recorded focus groups and individual interviews with student participants from previous years and their tutors respectively. Photographic material was compiled and used during interviews as a stimulus to reflection. A qualitative content analysis approach was employed through the systematic process of coding and identifying themes in the data (Hsieh & Shannon, 2005), guided both by previous reports and the aims of the Creative Interventions project.

The YDP was described as "a breath of fresh air" by students in that it came at a critical time during their course when they needed inspiration from an external source, as it "had the kind of motivation that I'd looked at alternative things. It was just building up the foundations of your personal practice". Students' motivation for taking part stemmed mostly from the moral and social value of working with children on a project initiated by them and for them and their schools.

Students pointed out that the programme developed their creativity, in that they were encouraged to "step up" in their game, "think outside the box" and "come up with something that hadn't been made before". Contrasting the programme with the more individualistic and competitive nature of their university work, students highlighted how teamwork also developed their creativity, because they had to construct their own identity within the group and negotiate ways to collaborate effectively with others. Creativity was also linked to other attributes such as striving to make connections between old and new knowledge; engaging with different ways of thinking as a result of being part of a multidisciplinary team; and being flexible and persevering in order to meet clients' needs.

The main learning outcomes identified by their tutors were opportunities made available to students to develop their presentation skills through constant consideration of how best to

present to individuals who knew little about design, and to collaborate effectively with a diverse group of people over an extended period of time. In relation to creativity in particular, tutors argued that working within a highly structured framework and with often conflicting interests and constraints was critical to the development of students' creative thinking and engagement.

The value of having taken part in such a programme remained with students after their graduation and in the workplace. As one graduate pointed out: "I'm really happy I took part ... it's almost like a medal that you wear afterwards." A key outcome of the programme highlighted by both students and their tutors was the development of a student voice, in that it provided students with a space where their ideas would be welcomed as well as challenged; a framework where opportunities to take initiatives and greater responsibility for their own learning abounded; and, essentially, an empowering experience where autonomy and independent thought were highly prized as a result of valuing individual students' expertise when working within a multidisciplinary team. In relation to the Creative Interventions project aims, this pilot case study provided rich information and clear direction for subsequent work on (a) the type, structure and organisation of WRL experiences creative arts students might encounter in the public sector; (b) the creative agencies (i.e. autonomy, independent thought) that enable students to tackle challenging situations within work-related activities; and (c) the value of this public sector activity for both students and their tutors.

There is now a growing body of research on the development of creativity in HE (Hardie, 2007; Jackson, Oliver, Shaw & Wisdom, 2006; Dineen, 2006). The transferability of creativity is key to Government education agendas and to the development of the creative economy (Seltzer and Bentley, 1999). Greater incorporation of WRL activities into the curriculum could increase the perceived value and awareness of skills gained and make explicit the transferability of students' creative attributes, enhancing graduate employability.

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We are looking for willing partners who could distribute our electronic surveys in their institutions. All responses will be treated anonymously, participants will be credited and the resulting paper will be made publicly available. We are also keen to hear from anyone researching or teaching in the area of creativity, or whose students are engaged in work-related learning in the public or third sectors, as we are interested in gathering case studies from a range of institutions. If you are interested in distributing the survey or contributing a case study, please contact Catherine Smith, project manager, c.h.smith@lcc.arts.ac.uk

Employability and disability

Val Chapman

Project

'Employability and Disability' is a National Teaching Fellowship Scheme (NTFS) funded project, led from the University of Worcester, which will run from February 2009 until January 2010. It offers a sector-wide initiative that aims to reduce discrimination and enhance disabled graduates' employability. It intends to achieve this by equipping disabled students with the skills to match employability competencies (Kubler et al, 2006), largely through enhancing academic and careers staff's knowledge and understanding about the potential challenges that disabled students may face in developing such skills. There are powerful ethical imperatives underpinning this initiative, as well as strong business, economic and legal cases for enhancing the employability of disabled students. This paper describes some of these key issues as well as the approaches that will be adopted to achieve the project's aims. For the purpose of this project, employability is understood as "a set of achievements – skills, understandings and personal attributes – that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy" (Yorke, 2005, p. 8).

Background

Inevitably, the Disability Discrimination Act (DDA) 1995 features as a key driver for this project. Under the DDA a person is defined as disabled if he or she has a physical or mental impairment that has a substantial, long-term and adverse effect on his or her ability to carry out normal day-to-day activities. The Act also covers impairment resulting from, or consisting of, mental illness, and includes long-term depression or anxiety. A 'substantial impairment' is one that is more than minor or trivial. Since December 2005 the effects of progressive conditions such as cancer, HIV infection and multiple sclerosis are regarded as substantial immediately on diagnosis for the purposes of the Act, although certain cancers that require only minor treatment may be excluded. A long-term impairment is one:

- that has lasted at least 12 months
- or is likely to last at least 12 months
- or is likely to last for the rest of the person's life.

It is likely that more than one in six students is covered by this broader definition (an estimate based on adults of working age who fell within the definition of the DDA, taken from a survey commissioned by the Department for Work and Pensions (Berthoud, 2006), and it is clear that this comprises a substantial number of higher education students whose legal entitlements need to be addressed.

Since October 2004, all employment has been brought within the scope of the DDA. All employers have duties which make it unlawful to discriminate, without justification, against employees or job applicants on the grounds of disability. Employers are legally responsible for ensuring that discrimination does not occur by making 'reasonable adjustments' to recruitment processes, work arrangements and the working environment in order to facilitate disabled people's right to work. Disabled students on work placement, undertaking Foundation Degrees, internships, or sandwich courses are also protected against unlawful discrimination under the Act. In 2006, the DDA introduced a 'disability equality duty' on all public bodies to promote equality of opportunity for disabled people; this means that higher education institutions (HEIs) must take account of the requirements of disabled people as an integral part of all their policies, practices and procedures. It is hoped that this NTFS project will make a significant contribution to institutional strategic priorities across the sector through allowing staff to meet their institutional and individual obligations under the Disability Equality Duty of the DDA, and to the national strategy of encouraging employers to employ more disabled people.

Despite the introduction of the DDA, discrimination has continued to occur; indeed, anecdotal evidence suggests that one of the unanticipated – and unwelcome – outcomes of the Act is the deployment of more sophisticated and covert approaches to discrimination, particularly in employment; Bell and Heitmueller (2008) also highlight potential negative outcomes of the Act, identifying uncertainty around litigation costs, low levels of general awareness about the Act among disabled people and employers, and a lack of financial support as possible reasons for these. A report from the Equality and Human Rights Commission

(EHRC) (2007, p. 2) states that by 2010 the UK will see a distinctly more diverse workforce: 40% will be over the age of 45, and less than 20% of those working full-time will be made up of white, non-disabled men under 45. The report also reveals that of the 6.8 million disabled people of working age in Britain, only 50% are in employment compared with 81% of non-disabled people (EHRC, op cit, p. 4). It is interesting to note employers' continued concerns through the reassurances given to them by various agencies; for example, that employing a disabled person is no more of a risk than employing anyone else in terms of sickness absence, hours worked, reliability, efficiency or punctuality.

Research has shown that students from non-traditional backgrounds (Archer et al, 2003) can face obstacles in accessing higher education, in achieving successful progression, and in successful transition into the labour market and postgraduate education (Croucher et al, 2005). In general, the findings of Tunnah et al (2006) challenged some of the previous assumptions about disabled people in the labour market. He found that, overall, there was substantial parity between disabled and non-disabled graduates obtaining employment; however, disabled graduates as a whole continued to be more likely to be unemployed (9%) than non-disabled graduates (6.3%) and, in terms of employment, 54.9% of non-disabled graduates were recorded as working full-time as compared with only 48.9% of disabled graduates. Notably, disabled graduates (9.7%) were more likely than their non-disabled peers (8.2%) to be found in part-time and voluntary work. These trends were reported as a continuation of the pattern from the 2003 survey (Disabilities Task Group, 2004), so there is every indication that this tendency will continue unless active steps are taken to intercede and enhance disabled students' employability so that more equitable employment rates are achieved. This view is supported by the findings of Matosic (2008) who describes a range of obstacles faced by disabled students in gaining employment, including, for example:

- anxiety about disclosing disability to potential employers
- a lack of awareness about the workplace because of a lack of work experience which also increases their levels of anxiety

- negative views about employment (that it will be too demanding)
- lowered self-confidence due to unsuccessful job applications, coupled with concern that disability was a deciding factor in not receiving a job offer
- poor self-marketing.

Methodology

The project features collaboration between the Universities of Worcester (the lead institution), Gloucestershire and Plymouth. Drawing on the wide experience of three National Teaching Fellows with recognised expertise in the field of disability, the project will build explicitly on the knowledge acquired through the creation of the existing heavily used resource SCIPS (Strategies for Creating Inclusive Programmes of Study) (www.scips.worc.ac.uk). A new web-based resource, 'USEMYABILITY', will be a key development. Post Dearing (1997), higher education institutions have begun to take a more holistic approach to developing students' employability skills, competencies and attributes in line with the 'Understanding, Skilful Practices, Efficacy Beliefs, and Metacognition' (USEM) model propounded by Knight and Yorke (2004). A paradigm shift has occurred whereby employability is now regarded as an explicit and embedded part of academic learning for all students. The Student Employability Profiles (Kubler, op cit), produced by the Higher Education Academy with the Council for Industry in Higher Education (CIHE), offer a model that maps employability skills, competencies and attributes that CIHE employer members said they value against skills developed through the study of a particular discipline as described in Subject Benchmark Statements (QAA, 2004). This model will be adapted, using the SCIPS conceptual framework, to underpin the USEMYABILITY resource.

Using subjects' Skills and Attributes Maps developed by the Higher Education Academy Subject Centres, the new resource will identify potential challenges for disabled learners embedded in the 'Generic Employability Competencies' (Kubler, op cit, pp. 27-28). It will identify those learners who may experience difficulties in achieving and/or demonstrating the competencies, and will provide advice and guidance on making reasonable adjustments to practice/provision within the legal framework. This

information will be supplemented by subject-specific case studies of good practice collated through collaboration with employers, Subject Centres and other relevant bodies. It is intended that engagement with the web-based resource, USEMYABILITY, will result in more confident, better informed staff who are able to help disabled students to achieve and demonstrate their employability skills, thus leading to more disabled graduates gaining employment or better jobs. It is envisaged that disabled students will also make use of the resource and become better informed of the types of reasonable adjustments that are possible in a range of learning and employment contexts, thereby allowing them to become more effective self-advocates in accessing their entitlements.

Since this NTFS project is in its infancy, it is too early to draw any firm conclusions as yet; however, the key messages beginning to emerge from our initial work are that there is a lack of consensus about the concept of employability, that a degree no longer guarantees a job, that under-employment of graduates is as significant an issue as unemployment, and that graduates' poor self-marketing continues to disappoint employers. Watch this space!

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Creating future proof graduates

Celia Popovic and Carmen Tomas

Background

Birmingham City University's NTFS project, 'Creating future proof graduates', began in July 2007. The core team comprised two National Teaching Fellows (Professor Anne Hill and Dr Nick Morton) and three members of the Centre for the Enhancement of Learning and Teaching (Dr Celia Popovic, Ruth Lawton and Jenny Eland). In September we were joined by a research assistant: Carmen Tomas, the project's only full-time member.

The project aims to provide resources to develop students' ability to function effectively in the workplace, by complementing formal university education with employability skills. By drawing on research with employers, staff and students we are creating a series of 'critical incidents' which bring to life the sometimes dry lists of employability skills. These critical incidents mirror authentic workplace situations.

The core project team has led the production of the resources, but in the context of a much wider group of participants which has included employers and colleagues across our own University and in partner institutions both in HE and FE, as well as current students and alumni.

Skills gaps

Our starting point was to interview employers. The literature on skills gaps at a national level provides a broad picture of the main areas for concern in workforce training (Leitch, 2006). Besides the basic skills (numeracy, literacy and ICT), a number of large scale surveys have addressed other skills that are valued by employers. A briefing from the Institute of Directors (2007) identifies the following skills as the most important along with the basics:

- people-related skills: communication skills; team working; meeting deadlines
- personal skills and attributes: honesty and integrity; reliability; hardworking and good work ethic; positive can-do attitude; punctuality.

A report from the Council for Industry and Higher Education (Archer and Davison, 2008) presents yet another set:

- thinking and conceptualising: intellectual ability; planning and organisational skills; analysis and decision-making skills.

Using these as the basis, we interviewed employers and graduates to get an insight into which are considered the most important. Our interviews were also aimed at eliciting real situations experienced by employers and graduates to complement the abstract concepts with real examples.

The following are skills that employers in a range of sectors perceive as difficult to develop:

- Housing: organisational culture and societal factors; help-seeking; communication skills and providing relevant answers
- Music: networking (perceived by both graduates and employers as crucial); understanding the sector and its 'unstructured' nature as a profession
- Law: commercial awareness; finding practical solutions to problems.

We also talked to a number of graduates about their views of the most important skills that they had to develop once they reached the workplace. There were some clear overlaps with the employers' views, but these were the key issues for the graduates:

- literacy: writing for diverse audiences (non-academic)
- personal attributes: developing assertiveness (how to say 'no')
- people-related skills
- networking: Music, Marketing and Housing graduates agreed that this is one of the most important skills to develop soon after leaving university
- dealing with difficult situations and recognising what to do when a theoretical model fails
- career-related: finding out what you do not want to do; understanding the profession; knowing how to go about finding information.

Learning resources

We now have eight critical incidents under development which have emerged from a consideration of the research findings. We have used different approaches for each incident but in each case have aimed to produce a resource that is embedded in a particular discipline or disciplines, but which can easily be adapted for use in another.

Too Much Information

This resource addresses a skill that is unanimously accepted as being slow to develop by recent

graduates, particularly for roles that involve interaction with clients. It illustrates the importance of providing relevant answers and responding to clients' needs, rather than saying everything that they know about a subject, which may have been a useful tactic when undertaking assessments during their courses. By means of cartoons and sound files, students are presented with a similar situation in several different contexts, including web design, housing, radiography and education.

Stone Soup

Uses techniques of storytelling to help students to appreciate the value of team-working. Many students are taught in a competitive context, but many employers value employees who can work together to the benefit of the organisation as a whole. *Stone Soup* is a cartoon which reworks the Grimm Brothers' tale of the same name (a fable about co-operation in a time of scarcity) in a modern context and is used in a session where the students start by hearing and watching the story, then create stories of their own – working together, of course.

No Offence Meant

Uses the real incident of a teacher in Sudan, who inadvertently caused immense offence by naming a soft toy 'Mohammed', to help students to explore issues of cultural difference and sensitivity. Students are presented with a range of web-based resources including quizzes and games to help them to develop their awareness of the issues involved when moving from one culture to another.

Ethical Dilemma

Addresses the skill of effectively seeking help and making prompt decisions in the workplace. It illustrates the thorny issue of what to do if you suspect that a fellow employee is doing something wrong, but you are not sure. Through the use of video, students are invited to play the part of a recent graduate who finds herself or himself in such a position. They first watch the incident, as though they are taking part, then listen to advice from a range of sources including best friend, fellow worker and trade union representative, before being asked to decide what action they would take.

Networking

Addresses a need, recognised by graduates, to

develop their networking skills after leaving university. Ludo meets Trivial Pursuits in this imaginative and interactive game which helps students to explore the many networking opportunities that can present themselves and might require prompt decisions and reactions to seize them.

Inappropriate Behaviour

In the environment of an orchestra, a theatre and a university, students are encouraged to examine an incident of inappropriate behaviour by someone in a senior position, to determine whether this is bullying and how they might react were they in such a position. This scenario makes use of role play and group work to help students to explore the tensions and options involved.

Expecting the Unexpected

Responds to the discovery by recent graduates that when they left university the theories did not always apply to real life. The skill of dealing with extreme and unexpected emotions, particularly in strangers, is explored in this scenario. It presents a series of unexpected emotional reactions such as being extremely upset or angry. Skilled actors create situations that students can use to rehearse how they might respond so that they are better equipped to deal with a similar situation should it occur in the workplace.

Who, What, Where...

Aims to equip students with the skills of research vital in modern society, as it examines a scenario where a graduate fails to deal appropriately with a client through a lack of knowledge which could have been met had they used the correct research tools. This can be applied to preparation for a job interview, or in many work situations.

Evaluation

We are taking a three-pronged approach to evaluation by reflecting on the experience of the team; the project process; and finally the resources themselves. The initial phase involved commissioning an external consultant to enable us to reflect on team performance and the hopes, fears and wishes that each team member brought to the project. This was extremely useful in enabling us to recognise a few tensions and concerns and to address them in a supportive and positive manner.

The team evaluation is ongoing. The evaluation of the project takes this approach a little wider, and will enable us to report on the experience of taking part in an NTFS project. We anticipate that this will help inform our response to future projects and may be of help to others. Finally, the evaluation of the resources is key, as we need to be sure that they meet the intended aims by improving graduates' employability and ultimately their ability to be 'future-proof' in an ever-changing world.

As the project develops we are seeking opportunities to share our progress with the HE community. We plan to provide a complete set of the resources with teaching notes and contextual information to every HEI in the UK. We will launch this at Birmingham Council House in December 2009, when we will invite all NTFS project teams to share their practice and progress. We will also extend an open invitation to the HE community and employers to view and try out our resources.

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We are actively seeking collaborators from across the HE sector at any level and in any discipline to try out and evaluate the resources. For more information please go to: www.bcu.ac.uk/futureproof.

The Assessment, Learning and Teaching Journal

Notes for contributors

The Assessment, Learning and Teaching Journal is a peer-reviewed Leeds Met publication. It is published three times a year both in hard copy and on the ALT resource website:

www.leedsmet.ac.uk/alt/index_publications.htm

The Journal supports the University's Assessment, Learning and Teaching Strategy by:

- sharing good practice
- building awareness of innovations across the University
- fostering a scholarly approach to writing about assessment, learning and teaching
- encouraging people new to research to publish their work, get feedback and hence develop it for external publication
- encouraging novices and experienced writers to contribute alongside each other
- developing a research base in assessment, learning and teaching.

Submissions

Two types of submissions are sought: previously unpublished articles and book reviews.

Articles should be a maximum of 1,500 words long. They should focus on assessment, learning and teaching practice, and be pragmatically orientated and reflective. They should contain insights, lessons or ideas potentially transferable to colleagues working in different parts of the University. Relevant topics include, but are by no means limited to:

- reusable learning objects
- innovative assessment
- curriculum development
- diversity and accessibility
- peer observation
- making learning happen in lectures
- two-year degrees, flexible delivery of programmes
- quality assurance (internal/external)
- external examining.

Book reviews should be 200 words long and should briefly review a book of relevance to assessment, learning and teaching theory or practice.

Refereeing process

All submissions will be reviewed by the editorial panel and may be sent to other reviewers. The reviewers' decision will be to accept (no changes), accept with changes, or reject. Feedback and guidance will be provided in the latter two cases and authors will be encouraged to re-submit their work. In addition, feedback will be given on accepted papers, which we hope will help authors to submit a full-length paper to an external journal.

Enquiries and submissions

Authors should submit their paper as an email attachment in Microsoft Word to:

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