

**Expanding the capacity to learn of
student teachers in Initial Teacher
Education**

Linda Rush and Annie Fisher

Biography

Linda Rush (University of Edge Hill)

Linda Rush has recently been appointed Principal Lecturer at Liverpool Hope University with particular responsibility for leading its BA (QTS). Her involvement with this publication stems from a substantial ESCalate project she won funding for in 2004/5 entitled: *An alternative perspective for ITE: Learning to Learn and its basis in personal beliefs about knowledge*. The overarching purpose of this project has been to promote professional development amongst colleagues working within the ITE context – to experiment and to ask questions about the use of learning to learn (L2L) as a useful vehicle to add value to the pedagogic repertoire in ITE. Her current research is based on gaining a better understanding of tutors' intellectual learning and more specifically, the relationship between tutors' epistemological beliefs and their engagement with professional development.

Annie Fisher (University College Plymouth, St Mark & St John)

Annie Fisher is a Senior Lecturer in Primary Literacy and is also Learning and Teaching co-ordinator for the School of Education and Professional Development at UCP Marjon. She worked for many years as a primary deputy head teacher, specialising in creative approaches to English, and has also been an advisory teacher for English. Annie was a member of the original ESCalate project team enquiring into L2L in ITE and has carried out significant research into her own practice in respect of this. Her current research interests centre on the role of oral language in the co-construction of understanding.

Acknowledgements

With grateful thanks to colleagues Laura Osborne, Ian Phillips (Edge Hill University) and Graham Rogers (Edge Hill University) for their contribution to the original ESCalate report from which this discussion publication stems. Also, thanks to colleagues who have taken time to share illustrative examples of how they enact L2L within their practice

Mhairi Freeman & Archie Graham, University of Aberdeen

Grace Hoskins, University of Sheffield

Samantha Twiselton, University Of Cumbria

Martin Watts and Martyn Lawson, University of Cumbria

Allan Owens, University of Chester

Clive Holtham, CASS Business School, City University

Caroline Colfner, University College Plymouth, St Mark & St John

Tony Pickford, University of Chester

Annie Fisher, University College Plymouth, St Mark & St John

Josie Harvey, University of Huddersfield

Contents:

Preface

The Imperative for Learning to Learn

- Competing definitions
- Implications for pedagogy
- Epistemic culture
- Constructivist paradigms
- Addressing the whole person
- Power; knowledge; involvement

The introduction of Learning to Learn perspectives into Initial Teacher Education

- Practitioner concerns with the learning of student teachers
- Constraints on espoused teaching philosophies

Towards an enabling Learning to Learn framework

- L2L in ITE – towards the establishment of an ‘enabling framework’ informed by Bransford, Brown and Cocking’s work on effective learning

Conclusion

References

Illustrative examples of Learning to Learn in practice

Reflecting on practice

- Networking at the Creativity Café: sharing knowledge around creativity in teaching

Staff development activity: considering the learning environment and student involvement with learning

Appendix 1

Preface

In a climate which sees tensions between the notions of teacher educator and teacher trainer, and where students (or trainees) are required to meet a set of professional competencies, or 'Standards', and to engage at Masters level with the complexities of teaching in 38 weeks, the challenge for many Initial Teacher Education (ITE) providers is to *involve* students with their *own* learning. Furthermore, with the growth of a culture of 'lifelong learning', and continuing professional development, there is an increasing emphasis on the necessity for a professional body which is able to maintain a full and active participation in the knowledge society. If student teachers are to take on a positive teaching identity in the classrooms of the twenty-first century, we need to consider ways in which they may be helped to understand the sophisticated concept of learning to learn. L2L in preparation for a lifetime of change is increasingly being posited as an end goal of education; demanding a shift in education outcomes from what's worth *knowing* to what's worth *being*. Promoting, as it does, a particular view of intelligence, L2L has important implications for the way we go about planning for learning, assessing, evaluating and tracking.

While some insight has been gained into the theoretical perspectives and pedagogy associated with the family of learning practices linked with L2L, it still remains a challenge to embed these practices within the sector. Until now this has largely occurred through direct work with teachers, including continuing professional development for teachers, building as this has on the associated research. This has resulted in the development of material and teaching approaches for use in schools. ITE, though, also plays a key role in determining the nature of practices employed within schools, given the way in which it helps to shape the competencies, expectations, attitudes and understanding of the body of teachers across the sector taken as a whole. It thus makes sense to explore the possibilities for introducing L2L within ITE; indeed this is essential if L2L perspectives are to impact on practice across the sector as a whole.

This paper focuses on L2L as a key aspect of student teachers' transition from school to ITE and in preparation for lifelong learning. As a starting point, the paper provides an overview of the L2L agenda, including drivers and definitions. Attention is then paid to the theoretical perspectives and pedagogy associated with the family of learning practices associated with L2L. Drawing on a range of practitioner voices, the challenge of embedding these practices within the sector is then discussed, and important key points in respect of culture and pedagogy are posited. More specifically, the importance of tutors viewing themselves as

learners is raised and the notion of *practitioner research* is highlighted as a way forward in helping individuals to creatively bridge the gap between their espoused beliefs and values and prevailing practice. The paper ends with a range of rich, illustrative examples of L2L-informed practice, drawn from seven different ITE settings. To further assist practitioners in developing a conceptual and analytical framework by which to investigate, evaluate and enhance their practice (either at individual, programme or school level) several rhetorical questions are then raised.

The imperative for Learning to Learn

Rapid changes in the work place linked to changing technology and societal needs as a result of globalisation have led to the concept of L2L being identified as one of the basic skills for success in the knowledge society. Fredriksson and Hoskins (2007) argue that such rapid change demands that citizens have the capacity to *learn to learn* 'if they are to maintain their full and continued participation in employment and civil society or risk exclusion', (p. 127). L2L is viewed as possibly the most important tool for lifelong learning; education and training, therefore, need to provide learning environments which foster its development. The key competencies associated with such learning have recently been developed and adopted across Europe.

'Learning to learn' is the ability to pursue and persist in learning to organise one's own learning, including through effective management of time and information, both individually and in groups. This competence includes awareness of one's learning process and needs, identifying available opportunities, and the ability to overcome obstacles in order to learn successfully. This competence means gaining, processing and assimilating new knowledge and skill as well as seeking and making use of guidance. Learning to learn engages learners to build on prior learning and life experiences in order to use and apply knowledge and skills in a variety of contexts: at home, at work, in education and training. Motivation and confidence are crucial to an individual's competence. (Education Council, 2006, para. 5, annex in Fredriksson and Hoskins, 2007, p.129).

Fredriksson and Hoskins' definition of L2L comprises both *affective* and *cognitive* dimensions. The affective dimension refers to social skills such as 'learning relationships', 'motivation', 'confidence', 'learning strategies', and the 'ability to overcome obstacles'. The cognitive dimensions are concerned with the 'capacity to gain', 'process and assimilate new knowledge' and 'students organising their own learning'. Although these are distinct, in reality, both dimensions overlap, and are general, rather than specifically subject-related; combined skills should be available for use in multiple contexts. Also emphasised is the importance of life-long (from birth to death) learning, and life-wide (taking into account the breadth of learning opportunities such as work, family, community and specific learning environments such as school or adult education) learning. A key to this is the ability to build

on prior learning and life experience, and to understand how to use the competence in multiple environments.

Claxton (2006), in discussing L2L (i.e. 'expanding the capacity to learn') as a valid end for twenty-first century education, asserts that too narrow a focus on lifelong learning for an employment agenda ignores the wider reality that many young people are not coping well with the general challenges of twenty-first century living. He argues that young people seem to lack the necessary personal resources to cope with the high levels of challenge, complexity and individual responsibility that the twenty-first century promotes. Believing that 'we are in a century of choice, problem-solving and learning, and that it is the job of education to strengthen the ability of pupils and students to make good choices, skilfully to solve problems and to learn powerfully' (p.3), he argues that the fundamental purpose of education is to increase the resources that young people possess to cope with life; giving them whatever-it-is we think they will need in order to thrive.

Claxton further argues that expanding one's capacity to learn is as much a matter of character as it is of skill and that we need to develop a richer vocabulary of learning that includes words like attitudes, dispositions, qualities, values, emotional tolerances, habits of mind (p. 4). Expanding young people's capacity to learn, as a goal of education could, Claxton argues, potentially help to give young people the confidence and capability they may lack in dealing with a host of real-life complexities and uncertainties and demands. But, he believes that we are very far from realising this potential arguing that 'we have to dig deeper, and not be afraid of talking about the character traits and habits of mind that is our intention to help young people cultivate' (p.4).

In an attempt to help us think more critically about the ways education and training can provide the learning environments for the development of L2L, Claxton turns to the notion of the powerful learner: 'the Explorer', 'the Investigator', 'the Sceptic and 'the Finder-Outer' (p. 5); and proceeds to unpack these characteristics through focusing on the learning dispositions – or character traits – that make possible powerful learning. Table 1 shows the kinds of things that people regularly associate with being a capable learner, which, Claxton reminds us, is not the same thing at all as being a successful student. Other researchers, such as Costa in California, and David Perkins' group at Harvard have designed similar lists, with cognitive neuroscience, experimental psychology and sociocultural studies all making a contribution to underpinning the theoretical basis for such dispositions.

Resilient	Resourceful	Reflective	Reciprocal
Curious (proactive)	Questioning ("How come?")	Clear-thinking (logical)	Collaborative (team member)
Adventurous (up for a challenge)	Open-minded (‘negative capability’)	Thoughtful (Where else could I use this?)	Independent (can work alone)
Determined (persistent)	Playful ("Let’s try ...")	Self-knowing (own habits)	Open to feedback
Flexible (trying other ways)	Imaginative (could be ...)	Methodical (strategic)	Attentive (to others)
Observant (details / patterns)	Integrating (making links)	Opportunistic (serendipity)	Empathic (other people’s shoes)
Focused (distractions)	Intuitive (reverie)	Self-evaluative ("How’s it going?")	Imitative (contagious)

Figure 1: Positive Learning Dispositions

Competing definitions

The DEMOS Report (2005), focusing on learning in schools in UK, highlights the difficulties associated with defining L2L, and its relationship with a range of other terms that are commonly used in education, such as ***problem solving, thinking skills*** and ***critical thinking***. While acknowledging this, they place meta-cognition at the core of the family of practices that they identified as comprising L2L. Meta-cognition, here, is defined as the capacity to monitor, evaluate, control and change how one thinks and learns. In less formal terms, L2L can thus be associated with reflecting on one's learning and intentionally applying the results of that reflection to further learning. It involves:

- understanding the demands that a learning task makes;
- knowing about intellectual processes and how they work;
- generating and considering strategies to cope with the task;
- getting better at choosing the strategies that are the most appropriate for the task;
- monitoring and evaluating the subsequent learning behaviour through feedback on the extent to which the chosen strategies have led to success with the task (Hargreaves, 2005, p. 7)

More recently, researchers involved with the ESRC TRLP *Learning How to Learn – in Classrooms, Schools and Networks Project* (2006), have explored the relationship between the closely related concepts L2L, learning how to learn (LHTL) and assessment for learning (AfL). Of particular concern for these researchers was a need to distinguish between L2L and LHTL, arguing, as they do, against L2L as a distinct capacity with generality of application across all forms of learning. To assist in their articulation of these slippery and contested concepts, they draw on a range of contemporary literature on learning theory. This highlights the importance of a range of *learning practices* (i.e. a concern for ways of working that might improve learning) comprising *reflection, intentional learning* and *collaboration*. Such practices are associated with the notion of second-order learning (Bateson) or double loop learning (Argyris and Schön), central to which is the role of learner as problem solver. Here, a successful learner is described as someone who *tries* to learn and is conscious of the strategies they employ, i.e. they are intentional learners who take responsibility for their own learning, often referred to as 'agency' (Resnick, 1989). Whilst such ways of being and doing may not come naturally, it is argued that they can be taught or developed (either consciously or unconsciously) towards 'learner autonomy' - a leading quality of LHTL (Dearden, 1976). A final section of this publication provides insight into how this can be done. The strong message from the discussion associated with the promotion of LHTL is that a separation of L2L from the learning process itself is both hard to justify and

unproductive. Rather, the researchers see a need for a range of elements of learning to be part of any approach to L2L (p. 124).

Implications for pedagogy

The challenge remains, however, to embed within our pedagogy the concept of L2L and the type and level of learning associated with it. How might this level of learning be encouraged in ITE settings? Lessons can be learned from approaches adopted in schools. For example, recently, attention has been turned to the development of ‘infusion’ or ‘epistemic change’ programmes in schools (Claxton, 2006). Infusion approaches explore ways in which the school as a whole and its classrooms in particular, can become settings in which the various constituent elements of learning capacity (e.g. reflectiveness, resourcefulness, resilience and reciprocity) are acknowledged, discussed, understood and systematically strengthened. Their guiding question is: what would it mean to organise your classroom and your pedagogy in such a way that every day your students can learn to learn more robustly, more broadly, and more flexibly and skilfully

Epistemic culture

Claxton (2006, p. 9) argues that an epistemic culture will need to attend to the areas indicated in Table 2. The *language* employed in the school will need to change. *Activities* will need to be selected, designed and framed so that they deliberately focus on stretching each aspect of learning capacity, with a screen for content and a screen for learning practices. *Wild topics* will be required that give students freedom to develop their emerging capacity for learning to learn. *Transparency* will be required as to intentions to expand learning capacity, with students *actively involved* in making the culture even more effective in doing. Students will need to be encouraged to look for out-of-school applications and modifications of the learning dispositions, so that a continual *transfer* of thinking occurs. There will need to be a sense of *progression*, so the dispositions continue to get stronger, broader and richer. And *modelling* of the learning dispositions will be required on the part of teachers.

Aspects of an epistemic culture
Language – we all speak ‘learnish’
Activities – a potentiating milieu
Split-screen thinking – the warp and weft
Wild topics – rich, real, responsible

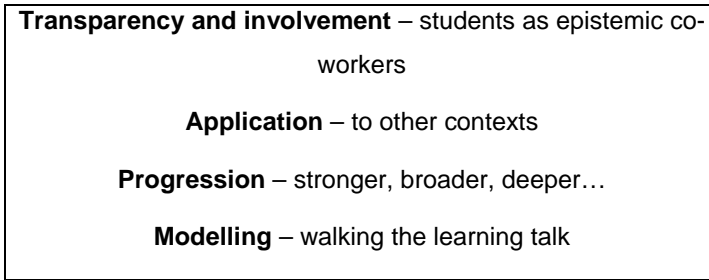


Figure 2: Aspects of an epistemic culture

Constructivist paradigms

Claxton's epistemic culture is echoed, we believe, in Poerksen's (2005) fascinating paper: *Learning how to learn* in which he describes a constructivist model of higher education, learning and teaching. Poerksen argues that a key problem of university courses is knowing how to begin teaching students who are 'already moulded into shape by ... the peculiarities of their cultural environments' (p. 471). He suggests that the first step might be to replace the *teaching paradigm* with the *learning paradigm* in order to avoid the 'hidden' perception that students are ignorant and need to be instilled with knowledge. To achieve such a paradigm shift, Poerksen proposes a constructivist model of education, learning and teaching in which:

- learners are viewed as active autonomous makers of knowledge;
- knowledge is not just transferred;
- tutors are not seen as the sole guardians of truth and certainty;
- emphasis is placed on the role of dialogue.

He goes on to suggest four role models for tutors who wish to develop and sustain such an epistemic culture.

1. *The Socratic teacher (involving the maieutic method)*, who like Socrates does not teach but rather creates conditions in which the hunger for knowledge is fuelled.
2. *The moderator* who tries to keep dialogues going and the desire for answers alive when the challenges of Socratic teaching increase beyond reasonable limits and threaten to become unproductive.
3. Learning as *cooperative researcher* – both teacher and learner are curiously involved in joint investigations and inquiries; ideas are tested out and experimented with. An understanding and valuing of research and its related skills are viewed as central to *all* students' experience in higher education.

4. The *perturbation agent* who, whenever there is premature consensus or intellectually unprofitable stalemate, introduces perturbing or irritating ideas or perspectives.

Here, the Socratically inspired teacher searches out the questions most suitable to 'agitate' their learning partners' minds to disturb, upset, and astonish them. The tutor does not set out to solve problems, but to generate them, assuming the role of problem-designer. Moderators then listen to the dialogues, and insist on definitions and terminological precision whenever necessary. They will prevent dialogues from drifting off into marginal areas that seem unpromising. They will point out existing knowledge canons of excellence but avoid presenting them as collections of ultimate truths whose validity is context-independent. The constructivist model of learning creates environments in which learning takes place because the partners – the teachers and students – recognise the importance of creating problems that are tackled through discussion to generate answers and solutions.

Addressing the whole person

L2L is also associated with a higher level of learning; the following section draws on the work of Rawson (2000), in particular his conviction that L2L is more than an intellectual activity. Rawson equates L2L with the ability of learners to consciously examine their learning processes, and to understand, and deal with personal experiences that interfere with the achievement of their potential. This type of learning which involves the engagement of feelings, attitudes and values, arguably requires a more holistic view of the student and the education process than is currently evidenced in higher education (p. 228). If we consider moving towards an alternative L2L pedagogic perspective for ITE; one which addresses the whole person, Rawson (2000) suggests that there are a number of key issues which need to be considered. There are fundamental issues of *power* and *knowledge*; *student involvement*; and *curriculum design*. Possibly of greater importance are *personal development* and *assessment*. Personal development is about the whole person. Without the engagement of feelings, attitudes and values as well as the intellectual dimension, Rawson argues that *significant* learning cannot take place. L2L then, can be considered as part of personal development. Since it is rare for students to be continuously involved in a self-conscious learning process, a mechanism such as assessment can play a significant role in developing it. If we consider the breadth and depth of questioning associated with L2L, Rawson (2000, p.229-323) offers a helpful framework for discussion, centring on purposes; practices and effects.

Purposes – The principal purpose of higher education is still seen by many as concerned primarily with intellectual activity and more specifically the development of critical thinking. Rawson (2000) suggests that current assessment purposes and practices tend to reflect this hierarchical view by giving priority to the role of the intellect. This search for evidence of knowledge, understanding, and abilities is a narrower view than that suggested as necessary to encourage L2L. Formative feedback and developmental activities can act as mechanisms for enriching assessment but may be sacrificed as staff respond to current pressures caused by increased student numbers, reduced funding and demands for greater research activity and output. Rawson (2000) believes university tutors are forced to focus on assessment procedures primarily related to selection, prediction (of final degree classification), and maintaining standards (external inspection).

Practices – The combined pressures outlined above can lead to a focus on practices that grade the learner. Such practices however negate formative, developmental assessment activity and position staff as exercisers of an authoritarian, intellectual authority. More innovatory assessment, akin to L2L such as self and peer assessment appear to be underrepresented. Rowntree (1987 in Rawson, p. 230) believes that practice is influenced by ‘pedagogic paradigms’ which can be analysed on a number of overlapping continua:

- *Closed vs Open*: how prepared are we to discuss with participants our approaches and assumptions concerning learning, knowledge, etc?;
- *Manipulative vs Facilitative*: do we want students to take on board our views and approaches, or do we seek to help them to develop their own meanings and learning processes?;
- *Transmission vs Interpretation*: do we see the education process as principally concerned with the transmission of functionally-based knowledge, or with the wider interpretation of its use, linkages and relationships?

Effects – Authoritarian and summative approaches to assessment, as outlined above, tend to reinforce the inevitable power differences between staff and students; this encourages an accepting and conforming, rather than questioning, stance. It also measures a rather limited range of abilities, and can lead to a negative backwash of surface learning. A number of researchers (Ashby, 1952; Entwistle & Ramsden, 1983; Miller & Parlett, 1983; Rawson, 2000) believe that this reproductive, syllabus-constrained orientation, ‘cue-seeking’ behaviour and ‘single loop’ learning results in dependency, rather than the learning autonomy we seek to promote through L2L. As Rawson suggests, students are likely to believe that assessment is ‘done to’ rather than ‘done with’ them: something to which one must ‘submit’ – with little engagement of self. Assessment is central to the development of

autonomy and the evaluation of one's own learning is a major means by which self-initiated learning also becomes responsible learning (Rogers, 1994). The ways in which assessment is conducted and the student perceptions of its role in learning, strongly influence the ways in which assessment, learning and personal development are perceived in relation to each other.

Power; knowledge; involvement

More overarching issues concerning *power*, *knowledge* and *involvement* are also raised by Rawson (2000) for ITE practitioners to consider in moving towards a more epistemic culture. Indeed, Rawson (2000) argues that assessment, whilst key to the support and encouragement of L2L can be seen as a manifestation of these wider issues.

Power

Rowntree's (1987) staff 'pedagogic paradigms' referred to earlier are important here. Any move from a unilateral system of assessment may be seen by staff as a fundamental power shift and as such, many might be reluctant to relinquish such control. However, the paradigms provide fertile ground for debate, and indeed, both Rawson (2000) and Keenan (1993) believe that the post-modern era, with its questioning stance to the finality of knowledge as end product may raise learners' expectations for increasing degrees of exchange and debate around assessment processes.

Knowledge

According to Rawson (2000) the reciprocal nature of knowledge acquisition and creation, and the question of what constitutes valid knowledge within the remit of higher education are two important areas. A view of knowledge as finished product needs to be considered alongside study as a learning process. There is a potential tyranny of specialisation and the continuing relevance of particular forms of knowledge needs to be questioned. The acquisition of *personal knowledge* needs to be approached without limitations imposed by redundant but over-influential forms of knowledge. Active involvement of the learner with the assessment process, whilst not without its pitfalls, is key to encouraging L2L.

Design

Like Rawson, Stephenson & Weil (1992a) argue for similar movements in the areas of learning objectives and learning designs, with the curriculum emerging from a critical dialogue between learner and educator. When the learning process is seen as more fundamental than the results produced, assessing how a person learns, and providing evidence of this, becomes as, or even more important, than assessing what has been learned. Thus, the challenge for educators is:

1. To shift the emphasis on assessment away from outcomes and towards assessment of process.
2. To develop that process to embrace more than intellectual and skill development.

Without this shift in assessment, the likelihood of significant gains is doubtful.

Rawson (2000) concludes by arguing that L2L is more than a skills set, stating that skills 'are about learning to do things better, not about learning to do better things.' (p.236). He goes on to argue the importance of self-determining individuals, rather than self-managing individuals, who perturb and irritate as they challenge the status quo. Here, a dialectical process between the developing, evolving individual and a developing, evolving society is evident (Tennant, 1996).

The introduction of Learning to Learn perspectives into ITE

Until now, the L2L culture has largely arisen through continuing professional development programmes, resulting in the development of material and teaching approaches for use in schools. ITE, though, also plays a key role in determining the nature of school practices, given the way in which it helps to shape the competencies, expectations, attitudes and understanding of student teachers. It makes sense, therefore, to explore the possibility of introducing, and embedding, L2L within ITE; indeed this is essential if L2L perspectives are to impact on practice across the sector as a whole. This, however, clearly remains a challenge, and we must emphasise that despite the extensive research base directly associated with L2L, the testing out of these ideas within the context of ITE has been limited. There may be factors at work against the establishment of L2L perspectives and practice within ITE. ITE indeed operates under a different set of constraints to those present for schools; any attempt to introduce L2L will need to address these constraints directly.

Before introducing illustrative examples of L2L-informed practice for ITE that constitute the heart of this discussion publication, we explore the context of ITE in expanding the capacity to learn of student teachers. This is shaped, primarily, by the responses of practitioners involved in staff development activity as part of the original ESCalate project from which this discussion publication stems (see Appendix 1).

Practitioner concerns with the learning of student teachers

The fixed nature of the ITE curriculum

A questionnaire linked to the initial phase of the ESCalate project asked practitioners to discuss their views of the current position of ITE. Many intimated that their work was being adversely affected by government policy, and external scrutiny, which they believed sought to micro-manage curricula and pedagogy. A common belief was that much of what is done in ITE is more akin to training, not educating, and that practice was far too tied to mechanisms and systems that viewed 'quality' in respect of learning in a very narrow, instrumental sense. Indeed, the *Standards* were viewed as the ultimate benchmark of 'quality'.

These practitioners believed that the ITE curriculum is 'fixed' by the TTA (now TDA). They referred to it as Standards-driven and content-laden. They did not perceive it as focused on the process of learning. Some thought the curriculum was difficult to define. One practitioner stated:

... the meaning of a 'fixed curriculum' needs to be considered in the first instance – what does this mean? For the most part many of us are just too damn busy doing too much, running around like headless chickens in what is supposed to be an educational establishment having no time to think about underlying philosophies and the meaning of life!

Another practitioner believed that:

It [the curriculum] can become fixed when in my case the programme runs on two campuses with different tutors, under different conditions, different timetabling arrangements etc and I have to ensure parity of provision.

Others felt that the curriculum is more likely to be viewed as being 'fixed' by those tutors who are insecure in doing things differently. Such views could implicate both the experienced practitioner, used to designing and delivering the curriculum in a very didactic way, or the inexperienced tutor, new to the higher education context. Conversely, one practitioner particularly valued the way that drama education and enactive learning encouraged resistance to fixity. Whilst acknowledging this individual's response, the majority of practitioners believed that their practice was being constrained and that tensions prevailed between their personal visions for student learning and actual practice.

It is important to note here that those practitioners engaging with the initial staff development session, aligned to the overarching project, espoused sophisticated teaching philosophies. For example, in response to the question: 'How would you describe your philosophy of teaching and learning?' many were strongly influenced by a socio-constructivist model of learning. Responses to this question included:

Education, as opposed to training or indoctrination, requires that those who are taught exercise meaningful control over what is to be learnt. I would place my philosophy of teaching and learning within the critical, emancipatory tradition of education. I do not see the relationship between knowing and being, thought and action, theory and practice, knowledge and experience, the objective and subjective as dichotomies but as dialogic. By this I simply mean that they shape each other in the process of coming to know.

Another practitioner discussed their teaching philosophy as being, 'Inclusive, Reflective, Challenging, Questioning, Open minded.'

Constraints on espoused teaching philosophies

A different group of ITE practitioners, meanwhile, on being asked to visualise what 'effective learning' looks like to them, presented the following:

Perspective 1

Use of multiple-staff as part of programme teams

Notion of (smaller/strategic) in-puts & larger out-puts and that there are multiple views of what these (in-puts & out-puts) might be

Valuing of 'experiences'

Importance placed on 'active listening' (on behalf of students & tutors)

Valuing of 'questioning' & 'researching'

Consideration given to the functional element of training in terms of employment and on-going learning

Attention paid to the use of a broad range of resources and the promotion of 'interaction'

Learning takes place in a 'pleasant environment'

Careful attention paid to how the aforementioned is organised in terms of a strategy

Perspective 2

Problem-solving approach taken

Notion of independent learner promoted

Learning in groups valued with an emphasis placed on communicating with one another

Desire to promote 'active learners' who engage as researchers

Importance placed on promoting enthusiastic learners

Mindful of learner's starting points

Perspective 3

Careful attention paid to the starting points of our learners & mindful of the work-life balance of our learners

Desire to see learners interacting and drawing on a wide-range of resources

From the out-set we see learning leading to graduation & employment and on-going engagement as learners

Perspective 4

Student-centred approach taken towards learning

Questioning approach towards learning valued and the use of a wide-range of resources encouraged

Friendly, enthusiastic tutors

Expectation that all students engage as 'active learners' who are in dialogue with one another

Important links made between the way students and children learn

Importance placed on tutor modelling good learning behaviour

Inclusive approach taken

Whilst there was considerable overlap between these small-group perspectives, all practitioners felt it important to conflate overlapping perspectives into some meaningful whole. There was a need to expand and make sense of the terminology used, highlighting the importance of identifying ways of clarifying to one another and to students what is meant by terminology such as 'student centred', 'active learning', 'experiences', 'researchers', 'analytical' and so on. The embedding of illustrative examples of pedagogic practice within a clearly articulated philosophy was viewed as a very powerful way of communicating ideas.

Perceived constraints, and possible ways forward in developing L2L, were also discussed. For example, whilst the notion of enquiry-based teaching appeared high on the agenda, it

was strongly believed that this should be more explicit and coherent, with tutors encouraging students to pay attention to the process of learning, not merely the product.

Shortage of time generally (linked to an over-stuffed curriculum), the turnover of programme team members and student lack of 'engagement' with such learning, were also seen as barriers. Practitioners felt that possible solutions included:

1. Giving students more time for such learning and *induction* into the notion of such learning.
2. Engaging tutors with professional development relating to the methodology of this style of teaching and learning.

Tutors felt that assessment needed to be aligned with enquiry-based teaching and learning.

Further constraints on the development of L2L were identified as:

1. The amount of information students have to manage
2. The lack of distinction between various bits of documentation trainees tend to be given.

Finally, although much importance was being placed on differentiation, the enactment of such thinking was problematic because of time tabling; a lack of time for colleagues to talk freely with one another, and a lack of explicitness to trainees about the differentiated approach being taken.

Key points

The focus on content within both the ITE and the national curriculum poses challenges for embedding L2L, although it is apparent that a focus on theories of knowledge will be of particular help in considering how to introduce such approaches to learning. Given that the student teachers who are now commencing their 'training' are part of the first wave of children who experienced the National Curriculum and SATs, there are issues of epistemology that need to be addressed directly with students. Students who hold strong views of knowledge as absolute tend to see themselves as passive receptors of that knowledge. L2L approaches clearly have the capacity to develop insight and the experience that students bring with them is an essential resource in this.

There needs to be a shift in attitudes; ITE courses should not be viewed as a means of supplying answers to questions related to curriculum content and delivery, and classroom organisation, with 'real' learning only taking place during teaching practice. Students have to be helped to develop the capacity to challenge views, and shape their own learning in partnership with their tutor. As Daly (2004) suggests, university classrooms need to become social spaces where meanings are created, and where the teacher is also seen as a learner.

There needs to be a shift in thinking so that students perceive the ways in which knowledge is formed through a complex web of social and collaborative interactions between partners.

The mismatch that many ITE tutors experience between their own philosophies, and the manner in which they are required to teach, points towards issues such as epistemology and understanding the professional identity of the teacher. Tutors need to view themselves as *learners* – hence the importance of *practitioner research*; this clearly affects wider professional commitments, and is discussed in some of the illustrative examples presented towards the end of this publication. Personal commitment, it is clear, provides a means to stimulate the creative responses that are essential in such a constrained environment, where the status quo mitigates against any embedding of L2L practices. If the use of dialogue, for instance, is seen as beyond the scope of the programme, with preference given to the need to cover content, then an important route to embedding L2L practices will have been ruled out. Creative responses are clearly essential, but these stem from a willingness to explore possibilities, and to develop new approaches.

In this it will be important to adopt a holistic view of the student and the education process, at least one that is more evidently holistic than is at present normally evidenced in higher education. Here, the learning involved not only covers the development of the whole person, but also requires the engagement of, and exploration of, the whole person. To more fully understand what is involved in L2L, we need a framework for understanding personal development. Wingate's (2007) article: *A Framework For Transition: Supporting Learning to Learn' in Higher Education* offers some very useful insights of a theoretical and practical nature in respect of this.

Towards an enabling Learning to Learn (L2L) framework

While it is clearly possible for individual ITE practitioners to move their own practice forward, embedding L2L perspectives more fully across ITE provision requires the engagement of entire programmes, and indeed whole Schools, or Faculties, as well. We move on now to consider ideas regarding an enabling framework for embedding the L2L agenda within ITE. Our approach is informed by one of the most authoritative accounts of learning and its application to education: *How people learn: brain, mind, experience and school*, edited by the cognitive scientists Bransford, Brown and Cocking (2000). They state that learning theory raises implications for the design of effective learning environments, which they

describe as: learner centred; knowledge centred; assessment centred; and community centred. Their discussion of an enabling framework takes account of the nature of learning and learning theory associated with the promotion of L2L discussed in the preceding sections, and links closely with the pedagogic insights emerging from the illustrative examples of L2L-informed practice to follow. Here, however, we conclude by considering the framework through the lenses of Bransford, Brown and Cocking's (2000, pp. 12 - 14) ideas about the four interrelated attributes of effective learning (to learn) environments.

L2L in ITE – towards the establishment of an 'enabling framework' informed by Bransford, Brown and Cocking's work on effective learning

Constructing a learner-centred environment

Learner-centred refers to environments that pay careful attention to the knowledge, skills, attitudes and beliefs that learners bring to the educational setting. It relates to the concept of diagnostic teaching, which starts from the structure of the student's knowledge. It is well established in cognitive science that learners always know something about the issue at hand and what they know is always their starting point for making sense. If the teacher's starting point is very different, then teacher and learner swiftly part company. The best students will then struggle to remember what the teacher teaches – and forget it quickly after any test or examination. Long term understanding comes through learner-centred teaching or provision.

Creating a knowledge-centred environment

Knowledge-centred environments provide for learners' understanding rather than mere performance. In understanding, students learn how to use and apply their skills and they also learn the structure of subjects as well as the content. They learn how a subject works and what its big ideas are. This involves approaches to teaching that help students 'learn the landscape' of the disciplines in the curriculum. This is analogous to learning to live in an environment: you learn your way around, you learn what resources are available and you learn how to use those resources in conducting your activities productively and enjoyably.

Creating assessment-focused environments

Assessment-centred environments are strong in formative feedback to learners and encourage more active student involvement in the assessment process. More collaborative forms of assessment are aligned with similar movements in the areas of Learning Outcomes and the curriculum emerges from a dialogue between the learner

and educator. Building upon this, assessing how a person learns and providing evidence on this becomes as important as, or more important than, assessing what has been learned. As such, the learning process is seen as more fundamental than the results produced.

Creating community-centred environments

Community-centred environments recognise that classrooms are embedded in a larger community of homes, businesses etc. and that connection should be made explicit in the design of learning experiences. There is a norm that people will learn from one another and will try to improve their learning. Implications of this concept include building good home/family support for learners and learning and maximising the capacity of students to use in school that which they experience out of school. Also implied is the employment in school of a wide range of out-of-school experts as teacher supplements.

Conclusion

Ultimately, our intention is to help practitioners develop a conceptual and analytical framework for investigating, and evaluating, the learning of student teachers, and to understand more about the ways their capacity to learn may be developed. The following section provides rich examples, drawn from a number of practitioners, and a variety of institutions, who are employing strategies to embed a L2L culture, and involve student teachers to a greater extent with their own learning. The publication concludes with series of key questions, or reflective cues, based on Bransford, Brown and Cocking's notion of an enabling framework for learning. These are designed to stimulate deliberation, both about the L2L agenda, and the strategies departments are currently using to develop learning environments.

References

- Ashby, W.R. (1952) *Design for a Brain* (London, Wiley)
- Black, P., McCormick, R., James, M and Peddar, D (2006) 'Learning How to Learn and Assessment for Learning: a theoretical inquiry'. *Research Papers in Education*, 21: 2, 119-152
- Bransford, J., Brown, A. and Cocking, R. (2000) (eds.) *How people learn: brain, mind, experience*. Commission on Behavioral and Social Sciences and Education ([CBASSE](#))
- Bruner, J. (1987) *Actual minds, possible worlds*. Boston, MA: Harvard University Press.

- Claxton, G. (2003) Learning to learn: a key goal in a 21st century curriculum. *Futures meeting the challenges*. Qualifications and Curriculum Authority paper. www.qca.org.uk/futures/.
- Claxton, G. (2006). Expanding the Capacity to Learn: A new end for education? Paper presented at British Educational Research Association annual conference, September, 2006 in Warwick University.
- Daly, C. (2004) Trainee English teachers and the struggle for subject knowledge. *Changing English*, 11. 2, pp 189 -204.
- Education Council (2006) Recommendation of the European Parliament and the Council of 18 December 2006 on key competencies for lifelong learning (Brussels, Official Journal of the European Union), 30 December
- Entwistle, N. & Ramsden, P. (1983) *Understanding Student Learning* (London, Croom Helm)
- Fredriksson, U.; and Hoskins, B. (2007) The development of learning how to learn in a European context. *The Curriculum Journal* Vol. 18 No. 2, June 2007 pp. 127 - 134
- Hargreaves, A. (2005) About Learning DEMOS Report of the Learning Working Group, London
- Keenan, W.J. (1993) Principles of postmodern pedagogy: towards a constitution for university classroom culture in the new age, *Reflections on Higher Education*, 5, pp. 90-109
- Miller, C.M.L. & Parlett, M (1983) *Up to the Mark* (London, Society for Research into Higher Education)
- Poerksen, B. (2005) Learning how to learn. *Kybernetes* Vol. 34 No. 3/4, 2005 pp. 471-484
- Rawson, M. (2000) Learning to Learn: more than a skill set. *Studies in Higher Education* 25.2, pp. 225 – 238.
- Rogers, C.R. (1994), *Freedom to Learn*, New York: Merrill

Illustrative examples of Learning to Learn in practice

Rather than in seeking to draw together different strands from the individual examples of practice that follow, we prefer to allow each of the practitioner examples to stand on their own as individual creative responses to ITE context. Nonetheless, these examples of practice expose important connections between student teachers' epistemological beliefs, conceptions of learning, and the conceptions underpinning their pedagogy when working with children in school. In this we can observe the underpinning of various beliefs and conceptions, as well as fundamental issues such as dialogue, self-identity, and the influence of the emerging professional context of practice.

Each has been cross-referenced to a particular aspect of the second-order learning highlighted on p9, and relates to developing learner autonomy

DEVELOPING INTENTIONAL LEARNING

Learning How to Learn and the “Connections Lab”

Mhairi Freeman & Archie Graham

University of Aberdeen

Since 2002 the School of Education at the University of Aberdeen has taken the view that students engaging in Initial Teacher Education (ITE) should begin by learning about themselves as learners. To this end, students in their first year of study in the BEd programme undertake an Education based course entitled, ‘Learning How to Learn’ (ED1028). This course provides the focus for this discussion.

The aims of ED1028 are to help students develop understanding of theories of learning and to build awareness of themselves as learners. The mode of delivery encourages students to engage in the co-construction of meaning through dialogue with peers and their tutor. Theories explored and opportunities to reflect on their own learning experiences highlight to students that learning is affected not only by cognitive processes but also by their emotions, self-efficacy and beliefs.

The course supports students in developing an approach to their own learning that draws from some of the key principles of ‘meta-learning’ as articulated by Biggs (1985) and Jackson (2004). Students are given opportunities to begin to self-regulate their learning through student-led tutorials, reflective writing and a final assignment where they reflect on their development as learners and set targets for future learning. Jackson (*ibid*) argues that the capacity to engage in meta-cognitive processes cannot be viewed in isolation from the environment and the flow of activities in which this process occurs. The students are formally exposed to a range of learning environments, some of which are outwith the School of Education.

Since 2005 elective courses in the Arts and Sciences have been available in Years 1 and 2 of the BEd programme. During the elective courses ITE students work alongside students from other degree programmes and have opportunities to extend the breadth and depth of their education. An aim of ‘learning to learn’ is for learners to use and apply knowledge, including that of how to learn, in a variety of contexts. When asked about their own perceptions at the end of the course (2006), 96% of BEd students felt they had an increased knowledge of how they learned. However, the evidence provided by the same students suggests that some do not recognise the value of engagement with other disciplines as relevant to their development as teachers or as contributing to their own learning.

Given that such a high percentage of students think that they have an increased knowledge of how they learned, we have to ask ourselves why a majority do not appear to apply informed self-regulatory processes to their learning in the context of their elective. However, such a dilemma provides an opportunity to enhance the 'Learning How to Learn' course in order to identify how students can be supported in making connections between their Education course and their electives. As to the way forward, the intention is to pilot an experimental pedagogy in the form of 'Connections Labs' to enable students to:

- i. reflect on the habits of the practitioner within another discipline;
- ii. value the experience of studying a discipline outwith Education.

Initially this pilot will target a voluntary group of ITE students and will be offered within four weeks of the elective courses starting.

References

Biggs, J. B. (1985) The role of metalearning in study processes, *British Journal of Educational Psychology*. 55, 185-212

Jackson, N. (2004) Developing the concept of metalearning, *Innovations in Education and Teaching International*, 41, 391-403

DEVELOPING INTENTIONAL LEARNING AND FOSTERING THE GROWTH OF METACOGNITION

Learning for the C21

Learning Module team

University College Plymouth, St Mark & St John

By 2006, it had become clear to tutors in the ITT department of UCP Marjon that the national drive towards achievement of Standards, and an increasing focus on module learning outcomes, was in danger of narrowing the curriculum to a focus on the measurable. Following intensive staff discussion of a range of 'Learning to Learn' approaches, in September of that year, a new module 'Learning for the C21st' was introduced to BEd 1 students.

This module, which ran across two terms, was designed to help students develop a better understanding of themselves as learners, and focused on a range of key issues to encourage reflection, critical thinking, and an examination of their beliefs, values and attitudes. Allied to this, based closely on Moon's (1999) work on the use of journals in promoting critical thinking, was the requirement to keep a learning journal. Lectures and seminars were structured to encourage participation, small group discussion and problem-solving, drawing on the work of such theorists as Brookfield (1995) who expands the notion of reflection beyond a solitary exercise by focusing on four lenses (that of autobiography, colleagues, pupils and 'literature'). The theme of meta-cognition (Brown and Palincsar, 1989; Flavell, 1976) was a thread which ran throughout, as students were encouraged to verbalise their thinking and learning behaviours, making the implicit explicit. As Flavell (1976) suggests, engaging in meta-cognition or meta-learning is key in learning how, and why, we do not understand something: this takes the learner some way towards believing that, with sufficient effort and appropriate strategies, they can comprehend challenging material (Pressley, Harris & Marks, 1992).

It was hoped that a close focus on the students' own learning would lead, in turn, to a greater ability to challenge received opinion, read critically, and promote effective learning in the classroom. Central to this was a consideration of the way in which students' own epistemology shaped their approach to learning and teaching; this was explored during tutorials which explicitly discussed the process of reflection, and linked the final assessment which required submission of the learning journal (pass/fail, but unmarked) and a short piece of writing on the *process* of keeping a learning journal. As Brownlee (2001) suggests, by reminding students that they are not assessed on their beliefs and values, but on the extent

to which they demonstrate a capacity to understand the concepts explored in the module, the relative sophistication of their reflection (Moon describes this as standing back and moving on), and their capacity for linking theoretical perspectives to personal constructs and understandings, they are able to write in a more relevant and analytical manner.

Much research suggests that it is not easy to reflect, and Griffiths and Tann (1992) suggest that when they begin, students will engage in reactive reflection that deals with the immediate. Although students initially found the reflective nature of the module challenging, and were unsure of what they were expected to put in their learning journals, it was clear that many of them had reached a stage of 'looking back and moving on' as they progressed to the second year of their course. Some had progressed to critical, or profound, reflection which focused on producing personal meaning.

References

- Brookfield, S. (1995) *Becoming a critically reflective teacher*. San Francisco, CA: Jossey Bass.
- Brown, A.L. and Palincsar, A.S. (1989). Guided, cooperative learning and individual knowledge acquisition. In L.B. Resnick (Ed.), *Knowing, learning and instruction: Essays in honor of Rober Glaser* (pp. 393–451). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Brownlee, J. (2001), "Knowing and learning in teacher education: a theoretical framework of core and peripheral epistemological beliefs", *Asia Pacific Journal of Teacher Education and Development*, Vol. 4 No.1, pp.167-90.
- Flavell, J. (1976). Metacognitive aspects of problem solving. In Resnick, L. (Ed.) *The Nature of Intelligence*. Hillsdale, New Jersey: Lawrence Erlbaum Associates.
- Moon, J. (1999) *Learning Journals: A handbook for academics, students and professional development*. London: Kogan Page.

THE ROLE OF UNCONSCIOUS LEARNING

Learning from Teaching, Teaching from Learning; modelling on the PGCE course

Grace Hoskins

University of Sheffield

During 2007/08, PGCE tutors at the University of Sheffield decided to start to investigate whether ITT students were aware that tutors tried to 'model' practice they had learnt in their classrooms. The basis of this investigation builds on the work and ideas of Vieira et al. (2008). They suggest effective teacher learning comes about by promoting teacher and learner autonomy in teacher education, in a way that uncovers the forces acting on it. By understanding what we do, we can envision new ways to best serve our students.

Our definition of modelling, with regards to teaching and learning, is that it is pretence for a purpose – perhaps in a different context/environment, or on a different scale, with the aim to demonstrate a skill either implicitly or explicitly.

Our rationale behind using modelling as a form of teaching, and hence hopefully learning, is four fold:

As we are training students to teach in schools, it seems sensible to be introducing them to the ideas and ethos behind the National Strategy for learning in secondary school, particularly as this appears to be the driving force to pedagogical change in schools. Evidence for modelling as a teaching approach in the National Strategy comes from research carried out by Muijs and Reynolds (2001) and also an Ofsted report which summarises findings from an HMI survey into good subject teaching in secondary schools (Ofsted, 2002).

We feel that modelling teaching and learning helps students acquire the skills to participate in the discourse (language and behaviour) of an unfamiliar knowledge community i.e. schools. Northedge (2003) argues that students come from increasingly diverse backgrounds, expectations and levels of preparedness, which calls for a shift in teaching approaches if they are to be able to engage with the appropriate knowledge community.

Modelling, in our view, can be seen as a form of scaffolding in order to encourage constructivist learning. By showing our students a possible way of approaching teaching they

can build on this knowledge to create their own understanding of what they would do in a different, but similar, situation.

Finally our modelling of learning sometimes has a purely pragmatic point. We're short of teaching time while the students are in university, so by modelling we can sometimes address two issues at once e.g. rather than having a session on group work we can model ways of doing group work in other sessions.

We decided to investigate our students' perceptions when they came back into university for a couple of days from their second teaching experience. The science tutor team volunteered to trial the methodology. Students were asked to focus on areas identified by tutors previously and to consider:

- examples of where they recognised modelling to have taken place in university sessions or by tutors;
- ways in which modelling had been used by tutors.

Initially the students were asked to carry out this task from memory; they then repeated it using their RUSS (Record of University Science Sessions – a document in which we encourage students to record briefly the main learning points from a session and any reflections they have). The information obtained was collated to enable the subject team to compare tutors' and students' perceptions.

First analysis of the data showed that the students seem to think tutors modelled a great deal, as they could remember many examples without referring to the RUSS, and the students put forward more examples than the tutors of modelling throughout the course. We have found these results encouraging. They suggest that what we do in university is memorable and that our modelling is quite explicit – even though we hadn't highlighted it before now. The fact that students can recognise a lot of examples when reflecting, more so than tutors anticipated, raises some questions though; does this mean we model without realising it sometimes? Is it that we have different ideas/definitions of modelling? Or do the students just describe the same event in different ways?

In order to take our tentative findings further, we consider that more work is necessary. Firstly other PGCE subject areas need to take part in the research, so we can be sure that modelling is recognised PGCE wide and not just in certain subjects. We need to continue to explore ideas and relevant literature to develop our theoretical understanding of the background of modelling. Following this we feel the next questions to be investigated are:

would the students have recognised modelling was taking place at the time it was demonstrated, or do they just recognise it on reflection? Has it had any impact on their learning, their reflections and teaching? Finally, as we're reflecting on our own teaching by taking part in this investigation – what are the implications for us as teacher educators?

References

Muijs, D. and Reynolds, D. (2001) *Effective teaching: evidence and practice*. Sage: Paul Chapman.

Northedge, A. (2003) 'Rethinking teaching in the context of Diversity'. *Teaching in Higher Education*, 8:1 p.17 – 32.

Ofsted (2002) *Good teaching, Effective departments*, findings from an HMI survey of subject teaching in secondary schools 2000/01. HMSO.

Vieira, F., Barbosa, I., Paiva, M. and Fernandes, I. (2008) Teacher Education towards teacher (and learner) autonomy. In Lamb, T. and Reinders, H. (eds) *Learner and Teacher Autonomy* (p.217 – 235). John Benjamins Publishing Company.

DOUBLE-LOOP LEARNING AND SELF-REGULATORY MECHANISMS

Beyond task management and curriculum delivery to building concepts and skills in Initial Teacher Education

Samantha Twiselton, University Of Cumbria

For some time now I have been grappling with the question of the knowledge bases required for effective student teacher development in both my teaching and also in the design of our primary ITE programmes here at the University of Cumbria. The knowledge required for effective primary practice can appear challenging, if not overwhelming, both for someone learning to be a primary school teacher and for those supporting his/her learning as there are so many different subjects in the primary curriculum, each having its own detailed requirements.

I found part of the answer to this problem in Sternberg and Horvath's (1995) attempt to define what is involved in teacher expertise. They comment that there are a number of studies (e.g. Chi et al. 1981; Larkin et al. 1980) that show that it is not so much the **amount** of knowledge that the expert possesses but **how it is organised** in the memory. In general experts are sensitive to the deep structures of the problems they solve – they are able to group problems together according to underlying principles. It seems that the key to being able to teach, for example, history or mathematics is not so much knowing endless information about the subject as understanding some of the key underlying principles and concepts that underpin it.

This is very much supported by my own study (Twiselton 2000, 2003, 2004, 2006, 2007) of the types of knowledge and understanding that primary student teachers develop as they go through their Initial Teacher Education programme. I found that (partly dependent on how far through the programme they were) these students could be placed into one of three main categories (or points on a continuum) – **Task Manager, Curriculum Deliverer** or **Concept/Skill Builder**. The Task Managers (who were likely to be near the beginning of ITE) viewed their role in the classroom in terms of task completion, order and business – without any explicit reference to children's learning. The Curriculum Deliverers did see themselves as there to support learning but only as dictated by an external source – a scheme, curriculum or lesson plan – and they struggled to give a rationale for *why what was being taught mattered* in any other terms. In contrast, the Concept/Skill Builders (likely to be at or near the end of ITE) were aware of the wider and deeper areas of understanding and

skill needed by pupils that underpinned their learning objectives. Of the three types, the Concept/Skill Builders were much more likely to be able effectively, consistently and responsively to support learning at every stage of the learning experience. The most outstanding quality that separated the Concept/Skill Builders from the other two categories was their ability to see the 'bigger picture' and give a rationale for what they were attempting to do in terms of key principles and concepts.

Once these categories had emerged from my study I found I was beginning to use them both implicitly and explicitly in my own teaching. I found that sharing the categories with student teachers themselves at a point (mid-point of ITE onwards) helped them to develop a meta-perspective on their own development and in doing so helped them to strive consciously to be a Concept/Skill Builder. Typical tasks included the systematic examination of key concepts and skills underpinning lessons or longer term plans and the identification of why they were important in the broadest sense. 'Importance statements' became embedded in the planning process for all student teachers.

In addition to building this kind of thinking and accompanying learning activities into my teaching at a point where student teachers were ready to understand and benefit from them I have found that the categories can be useful in developing appropriate programme structures. This is because, to some extent, the categories can be viewed as a developmental continuum, where student teachers are more likely to be a Task Manager near the beginning of their ITE programme and will hopefully have become a Concept/Skill Builder by the end. This means modules and placements can be planned to take account of the stage the student teachers are likely to have reached and can therefore reflect the priorities at that point and also include what is needed to move them on.

An example of this can be found in the structure of the University of Cumbria Primary PGCE programme. Early modules and the first school placement are deliberately designed to focus on helping student teachers to get to grips with classroom tasks and management so that they build the confidence to move beyond 'task management' as their first priority as quickly as possible. Mid-way through the programme (around late February) the focus shifts to a much deeper analysis of children's learning in terms of skills and concepts and the role of the teacher in supporting it. This links with the masters level modules that students take at this time and represents a level of working that they would not have been capable of nearer the beginning of the programme.

A similar approach can be seen in the design of our four year primary degree. In this, mid-way through their third year student teachers study a range of modules with a linked

placement where they are required to examine explicitly the underlying beliefs and values that underpin their approach to the curriculum and to children's learning within it. This is also linked to preparing them for being able to articulate these in preparing job applications and interviews. Student teachers report that they feel much more able to cope with the more searching interview questions that are testing their approach and philosophy as a result of these experiences.

References

- Chi, M. T.H ., Feltovich, J. P. and Glaser, R. (1981). Categorization and representation of physics problems by experts and novices. *Cognitive Science*, Vol. 5 (2), 121-152
- Larkin, J., McDermott, J., Simon D. and Simon, A. (1980). Expert and Novice performance in Solving Physics Problems. *Science*. Vol. 208, pp 1335-1342.
- Sternberg, R. and Horvath, J. (1995). A Prototype View of Expert Teaching, *Educational Researcher* Vol. 24, no. 6, pp 9-17.
- Twiselton, S. (2000) Seeing the Wood for the Trees: the National Literacy Strategy and Initial Teacher Education; pedagogical content knowledge and the structure of subjects', *The Cambridge Journal of Education*, Vol 30, No 3
- Twiselton, S. (2003) 'Beyond the Curriculum: Learning to Teach Primary Literacy' in Bearne, E., Dombey, H. and Grainger T. [eds.] *Interactions in Language and Literacy in the Classroom*. OUP
- Twiselton, S. (2004) The Role of Teacher Identities in Learning to Teach Primary Literacy *Educational Review*, Vol. 56, No. 2
- Twiselton S. (2006) 'Developing your teaching skills' in Arthur, J., Grainger, T. and Wray, D. [eds.] *Learning to Teach in the Primary School*. Routledge, London
- Twiselton S, (2006) The problem with English: the exploration and development of student teachers' English subject knowledge in primary classrooms, *Literacy* Volume 40 Number 2 pp.88-96
- Twiselton, S. (2007) Seeing The Wood For The Trees – Learning To Teach Beyond The Curriculum: How can Student Teachers be helped to see Beyond the National Literacy Strategy? *The Cambridge Journal of Education* 37:4

SOCIAL AND COLLABORATIVE LEARNING: THE GROWTH OF AUTONOMY

Inquiry into Learning

Peter Ovens, Pat Wallis and Frances Wells

Nottingham Trent University

The main idea of this innovative approach is that students are asked to develop their practice as learners by inquiring into it collaboratively. This is intended to encourage them to become more autonomous yet interdependent, strengthening their awareness of their capacities of involvement, personal development and credible, practical knowing.

Introduction

The three year BA programme in Childhood Studies at Nottingham Trent University has two IIL modules across years 1 and 2. IIL1 aims to enable students to learn how to learn in higher education. It is unlike a 'study skills' approach to supporting students' adaptation to university learning by placing responsibility for their learning on the students themselves, developing their meta-cognitive awareness of their learning and of themselves as learners and professional people.

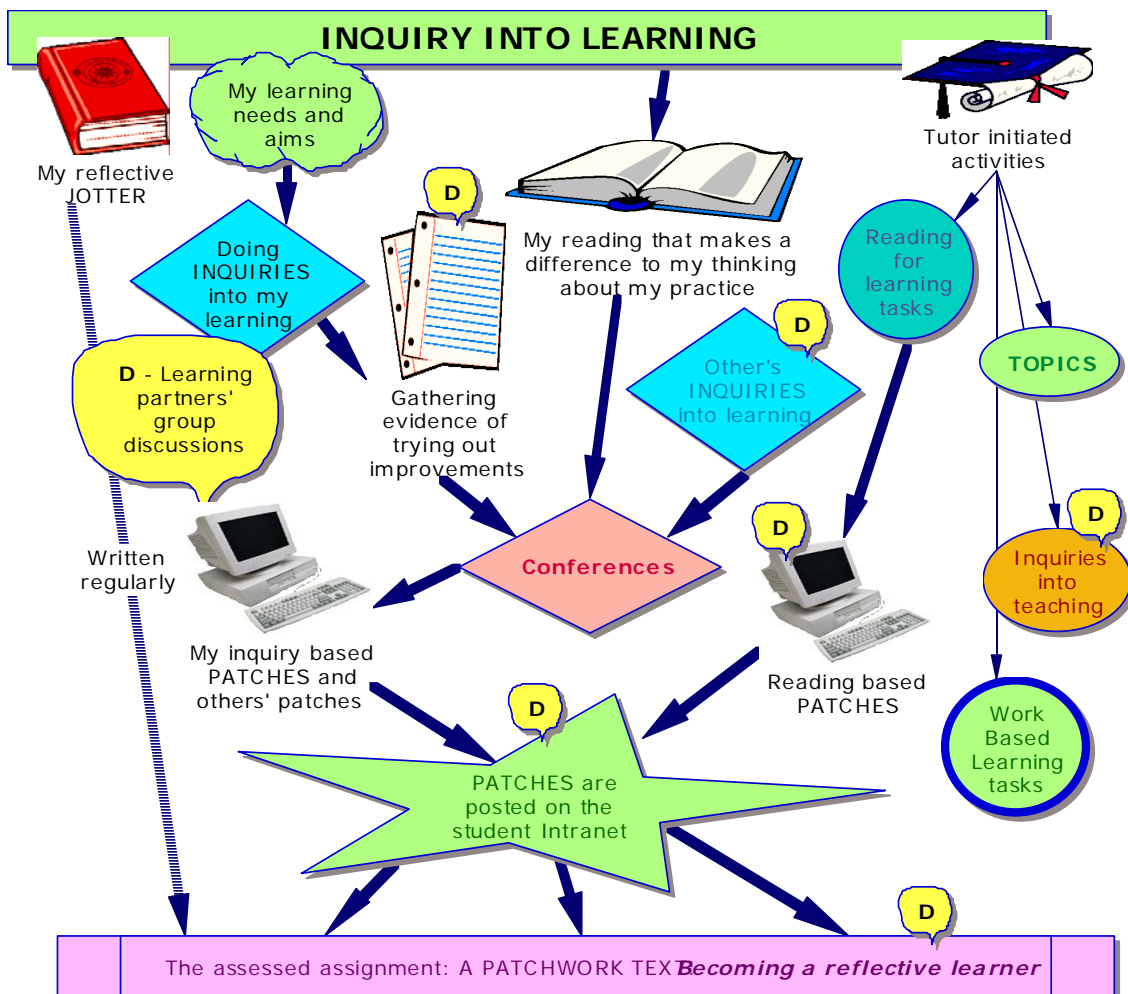
IIL1 is about becoming a reflective learner and IIL2 is about becoming a professional inquirer. They relate progressively to each other and to the Year 3 module: Professional Research Project.

The curriculum of both modules draws upon the process approach to curriculum of Lawrence Stenhouse (1975). The IIL philosophy is person centred, drawing on Carl Rogers' (1988) model of human relationships and learning. The approach is a practical expression of Ronald Barnett's (1997) ideal of critical being: that students learn how to integrate for themselves critical thinking and reasoning about knowledge with effective action and critical self reflection (broadening into the domains of the self and the world). The early years educational ideas of Ferre Laevers have helped to shape our thinking and practice and Donald Schön's reflective practitioner theory informs our work on professionalism.

The dominant way of working is for students to carry out cycles of action inquiry projects of individual and collaborative learning. They are helped to identify an inquiry focus from their perceived needs, difficulties, purposes and interests as learners, selecting whatever seems to be significant at their current stage in their learning and development as a learner. Each inquiry begins by gathering evidence of the relevant part of current practice, to deepen

understanding of it. Reflective discussion of evidence leads to ideas for devising action steps to improve practice and for reading about theoretical frameworks which enrich thinking. Each inquiry enables the student to develop their own, evidenced, constructive response, which is an integration of practical improvements with personal theoretical insights. There is discussion of ideas and evidence with learning partners at each stage and sharing of reports of the inquiry process and outcomes across the student group. Also, there is ongoing personal, written reflection about the experiences of this process. After several cycles, each student uses their cumulative portfolio of writing to assemble a Patchwork Text assignment.

The module process for IIL1 is summarised in the following diagram. Please note that **D** signifies discussion of relevant issues at each of the points indicated in the process



Students are expected to examine their learning experiences using simple inquiry techniques, and generate evidence based descriptions for each other and for tutors. For example, a Learning Inquiry into *'Improving my use of study time'* might consist of a record of what that student did, hour by hour and day by day, over a week, annotated with self-evaluative comment on the quality of any learning that took place and reflections on the experience of focussing on time. Then, there is collaborative exploration of ways to improve the learning within each inquiry context, generating *action steps*, which are tested against fresh experience. Potential improvements in practice can arise from the student's own ideas, from suggestions by peers and the tutor or from theoretical ideas from reading. Students are encouraged to take increasing responsibility for developing positive attitudes, effective learning strategies and creative ways of solving problems. They may apply to their practice as learners and test relevant theoretical frameworks such as research into learning styles, multiple intelligence, self efficacy, etc.. At the end of each Inquiry cycle, a meeting of the group called a **conference** take place to discuss each student's *learning story*. There is celebration of achievements and coaching for each others' continuing improvements. The importance of discussion has been accentuated by using explicit procedures for giving and receiving feedback. The final part of each cycle is writing a report which is made available to all students and tutors in the year group by means of a *Wiki*. These interim products of their developmental learning are referred to as **patches**. At the end of the module, they are *stitched together* to create a composite document called a **Patchwork Text**, the module's assessed assignment. The student extracts from their portfolio of patches the significant material which is organised into a coherent document with the addition of short passages of linking, reflective commentary called the *stitching*. Throughout the module, in parallel to building up the patches, students are routinely expected to make entries in a personal reflective Journal called the **Jotter** about their questions, puzzles, curiosity, apprehensions and surprises arising from their learning and experience. They are encouraged to share Jotter entries with each other and use them in preparing the Patchwork Text to provide evidence of changes in perspective, deepening of awareness and gains in understanding. Other features of the module include structured, tutor led inquiries into a series of conceptual frames for understanding learning. Students are free to revisit previous inquiries or start new ones that emerge according to their own assessment of what is relevant to improving their practice. This repeated, cumulative, personal and collaborative approach to learning aims to contextualise learning rather than train students in skills through decontextualised exercises.

III 1

The title of the Patchwork text assignment is *Becoming a reflective learner*. The criteria of assessment are: 1) Involvement, 2) Personal development, and 3) Credible, practical

knowing. Students are taught to understand and apply these criteria routinely to their study, so that they influence each student's *internal locus of evaluation* which guides their learning behaviour. Various notions of *learning community* apply to module terminology and procedures such as *learning partners* and *critical friends*.

Examples of inquiries that students have undertaken are: "How can I learn more from my reading?"; "How can I feel more confident for the role-play session?"; "How can I motivate myself to prepare for seminars?"; "How can I give more time to writing my assignments?"; "What is my best way to concentrate in sessions?"; "What is the proper way to reference my assignments?"; "How can I make more improvements with my essay writing?"; "How can I improve my listening?"; "How can I overcome my negative feelings about my progress on this course?"; "How can I improve my ability to make a PowerPoint presentation?"; 'What type of learner am I? How can knowing this help me to learn?'

Some students say that they never really 'get' the reflective approach, however, many gain a positive appreciation of it quite quickly and some seem to be liberated by it and do amazingly innovative and inspiring work. It is during later stages of the module, or for some students, later stages of the programme, that a fuller appreciation of their achievements in IIL becomes more fully clear to them.

References

- Barnett, R. (1997), *Higher Education: A Critical Business*, Buckingham: The Society for Research into Higher Education and the Open University Press.
- Stenhouse, L. (1975), *An Introduction to Curriculum Research and Development*, London: Heinemann Education.

INTENTIONAL LEARNING – THE DEVELOPMENT OF AGENCY

Using a meta-analysis activity to make critical reflection explicit in teacher education

Martin Watts and Martyn Lawson

University of Cumbria

This paper argues that publishing lesson evaluations on a discussion forum and participating in a meta-analysis activity results in a richer form of teacher education. Beginning teachers engage in an activity that makes critical reflection an explicit outcome of their course.

Wilson (2005) reports that teachers can be assessed as successfully meeting QTS standards whilst still having a restricted understanding of teaching and that this limits their capacity for sound decision making in the classroom. In order to compensate for insufficient experience and understanding and to enable a more effective approach to teaching and learning, teacher education requires supplementing by the development of higher level thinking skills such as critical reflection.

School placements offer beginning teachers the chance to gain experiences through listening and participating in discourse, observing others and sometimes they get the chance to reflect or discuss these experiences. However, Eraut (1994) contends that this type of professional discussion is rare. By not attending to the support of developing reflective practitioners we are in danger of providing a form of 'restrictive apprenticeship' described by Fuller *et al.* (2005). Producing lesson evaluations is a strategy which may counter this potential for restricted experiences.

However, these benefits are undermined when student teachers fail to understand the potential value that activities like evaluating lessons offer to the reflective practitioner. In our experience this has resulted in the production of mechanistic descriptions of teaching experiences where it is rare for students to engage in critical reflection upon their teaching. We have found that they fail to explore theories of teaching and learning and consequently do not identify and plan for effective changes to their practice.

The paper describes the application of a rubric constructed by Ward and McCotter (2004) as a tool to enable teacher educators to make the skills of reflective practice in beginning teachers an explicit part of a teacher education programme. The rubric was presented to a cohort of student teachers to use in a meta-analysis, or self-review, which enabled the students to appraise the level of critical reflection in their lesson evaluations.

The students were first required to post one lesson evaluation per week to a dedicated discussion forum and to comment on lesson evaluations posted by other members of their cohort. This activity was intended to ensure they read their peers' evaluations, to share experiences and to show them that other students often faced similar problems to their own.

At the end of the first school placement period the Ward and McCotter (2004) rubric was presented to the group during a University based session. In this session the students were given the opportunity to clarify their understanding of the rubric and, through discussion, to build a common understanding of how to interpret the criteria statements. The student teachers were instructed to apply what they had learned from the rubric to the lesson evaluations they produced during a subsequent placement period.

Towards the end of the second school placement period the students undertook the meta-analysis activity in which they were asked to apply the rubric to the lesson evaluations they had published and to produce a written self-assessment of the quality of critical reflection demonstrated in their evaluations. They used the rubric to identify changes in the quality of critically reflective practice evidenced in their lesson evaluations. It was anticipated that the meta-analysis activity would enable the students to recognise a progression and to enable them to identify how they might continue to improve the application of critically reflective thinking skills to lesson evaluations. In their written self-review the students included quotations from their lesson evaluations which, in their view, best evidenced their conclusions about the level of their critical reflection when measured against the rubric.

As a result of engaging with the rubric in this meta-analysis activity, evidence emerged which suggested that the students were able to recognise qualitative changes in the effectiveness of their lesson evaluations through the development of skills of critical reflection. The activity also helped the students to better appreciate the value of lesson evaluations.

References

Eraut, M. (1994) *Developing Professional Knowledge and Competence*, The Falmer Press, London,

Fuller, A., Hodkinson, H., Hodkinson, P. and Unwin, L. (2005) Learning as peripheral participation in communities of practice: a reassessment of key concepts in workplace learning, *British Educational Research Journal*, Vol. 31, No. 1, February, pp. 49-68.

Ward, J. and McCotter, S. (2004) Reflection as a visible outcome for preservice teachers, *Teaching and Teacher Education*, 20, pp.243–257.

Wilson, E. (2005) Powerful pedagogical strategies in initial teacher education, *Teachers and Teaching: theory and practice*, Vol. 11, No. 4, pp. 359–378.

UNCONSCIOUS LEARNING THROUGH SOCIAL COLLABORATION

Modelling a capacity for learning through the derive

Allan Owens, University of Chester

Clive Holtham, CASS Business School, City University

Our concern is with the way the university lecturer can model his/her own capacity for learning to learn in ways that impact on course structure and the trainees/students view of knowledge. Our specific concern is with collaboration across what we call “wide boundaries”. This case study is of a scholarly collaboration between two academics in Education and Management that has led to course innovation in terms of learning to learn in an MBA module and a PGCE (Drama) course, the latter of which is the focus for this short study.

A key dimension of this collaboration has been the ‘dérive’:

One of the basic situationist practices is the dérive [literally: “drifting”], a technique of rapid passage through varied ambiances. Derives involve playful-constructive behaviour and awareness of psychogeographical effects, and are thus quite different from the classic notions of journey or stroll. (Debord, 1955)

After accidentally initiating derives, these have subsequently been self-consciously constructed as a support to our collaboration and as a means of enabling our trainees and students to learn with their peers through drift. In concrete terms this means that as two academics working in two different fields we allocate periods of time to meet and learn together through a playful form of St Augustine’s (354-430 AD) ‘solvitur ambulando’, learning through walking about. To date we have derived together in and in between; London, Chester, Nottingham, York, Uttoxeter, Liverpool and Nuneaton.

We then individually use the documentation and theorisation of this process to model these approaches to learning for our students together with the use of another time-honoured learning affordance, the reflective sketchbook (Holtham et al. 2008). We also provide a city-scape for the students to experiment in. For the MBA students this is the City of London, for the PGCE trainees it has included Venice, Florence, Prague, Amsterdam, and Barcelona. Time, place and space are created for a form of informal, critical learning not customarily valued in the self-pressurising technicist state of Initial Teacher Education in England and Wales (Hill, 2007).

In a derive one or more persons during a certain period drop their relations, their work and leisure activities, and all their other usual motives for movement and action, and let

themselves be drawn by the attractions of the terrain and the encounters they find there.
(Debord, 1955)

Following Debord's suggestion that the 'most fruitful numerical arrangement' to derive is 'several small groups of two or three people' (ibid), the PGCE trainees organise themselves in this way. In addition three of four whole group sessions are scheduled into the week to allow for intercultural and interdisciplinary encounters that deriving does not allow for. For example, a two hour workshop in a school in which 40 drama and art PGCEs work together with 40 senior school pupils whose first language is obviously not English and a practical session with an applied theatre professional looking at the ways in which drama operates in their cultural context.

Debord suggests that whilst the average duration of a *dérive* is one day it often takes place within a deliberately limited period of a few hours, or even fortuitously during fairly brief moments. The PGCE trainees are encouraged to view the derive rather than the organised sessions as being core to the week and so select which of these they might attend. The emphasis is on educating reflective practitioners rather than training technicians which places this approach firmly in the learner-centred as opposed to teacher-centred camp in the on-going debates about teacher quality and teacher education in many parts of the world (Zeichner and Ndimande, 2008).

The goal for tutors and students is not necessarily to study a terrain or to emotionally disorient ourselves, though as Debord (1955) suggests 'these two aspects of derives overlap in so many ways that it is impossible to isolate one of them in a pure state'. The effect to date has often been engender a form of 'epistemological curiosity' (Freire, 1998) where the everyday is made strange in a way that encourages a questioning of the taken for granted. Drama trainees recognise this as a form of creative alienation (Brecht in: Willet, 1964).

Whilst the goal of the derive during the enrichment week is, in Debord's terms, deliberately 'delimited' and 'vague' the trainees are clear that the ideas generated by this will directly inform their major subject assessment on the PGCE course. They know that, like the tutor, they will be keeping a reflective sketchbook, that from this they will create a drama workshop triggered by derives and that this will have an explicit research dimension.

For example, two students deriving in Barcelona (2008) suddenly came across a gaggle of geese guarding a memorial plaque to a martyred Catalunyan saint in a church in the heart of the city. They subsequently read about her life and created a parallel contemporary drama workshop exploring attitudes to non-aggressive resistance in violent times. This allowed for research into the spiritual and moral dimensions of the curriculum through a consideration of Year 10 and 11 pupil participant views, attitudes and behaviours.

Of crucial significance at key points in this collaborative tutor and student venture is the initial specific lack of deeper purpose in the relationship and encounter with others and with places. Debord argues that the seemingly random nature of the *dérive* may not be as aimless as it appears. This has led us to review and explore the potential of wide collaboration, supported by novel learning methods, in a university system that continues to demand explicit functional objectives.

References

Debord, G.E. (1955). Introduction à une critique de la géographie urbaine, Les Lèvres nues, No

(6 Septembre).

Hill, D. (2007) Critical Teacher Education, New Labour, and the Global Project of Neoliberal Capital, *Policy Futures in Education*, 5(2), pp. 204-225

<http://dx.doi.org/10.2304/pfie.2007.5.2.204>

Holtham, H., Owens, A. and Bogdana, M. (2008) *M Level Inquiry Across Disciplinary Boundaries: Using Reflective Sketchbooks*, BERA Annual Conference: Herriot Watt University, Edinburgh.

Friere, P. (1998). *Teachers as Cultural Workers*, Oxford, Westview Press.

Willet, J. (Ed.) (1964) Brecht on Theatre: The Development of an Aesthetic. Berkshire: Methuen.

Zeichner, K. and Ndimande, B. (2008) Teachers & Teaching: Theory and Practice, Vol 14, Number 4, August 2008, pp. 331-343 (13)

SECOND-ORDER LEARNING THROUGH COLLABORATIVE DIALOGUE

Learning to Learn approaches to learning: Socratic Circles

Caroline Colfer

University College Plymouth, St Mark & St John

One approach to involving students more actively with their learning was taken by Caroline Colfer at UCP Marjon who, following her success in using Socratic circles in Design Technology work with experienced teachers, decided to trial them in first year undergraduate and postgraduate classes. Literature suggests (Armbruster et al., 2001; Copeland, 2005; Duke and Pearson, 2001) that the original Socratic idea of encouraging students to think for themselves through engagement with dialogue can best be promoted through requiring participants to engage with reading before attending sessions. Thus, preceding a practical workshop on cams, students were asked to read and annotate a theoretical paper on the nature of design technology, indicating anything that intrigued or puzzled them. Following the workshop, students were asked to seat themselves in two concentric circles; the inner circle responded to an initial question posed by the tutor "How does the practical activity relate to the theoretical paper you read?", whilst the outer circle used a checklist to evaluate their participation. Colfer noted with interest that that the level of debate in which students at the very beginning of their course engaged was no less philosophical and critical than that of experienced teachers.

Since the dialogue in a Socratic circle is exploratory, it is essentially concerned with the suspension of prejudice; it encourages an open-minded attitude to change, and to the idea of being wrong. This approach models the value of transcending the narrow culture of debate aimed at winning an argument, and provides opportunities for critical thinking. Foremost is the notion that a considered exchange of ideas is more important than reaching common agreement. Participants are required to listen actively, without interrupting; they are encouraged to paraphrase another's ideas before proposing their own opinion. The observers look for evidence of preparedness, ability to listen respectfully and ask insightful questions, and a willingness to both clarify and seek clarification.

According to Copeland (2005: 23) this approach is key to developing autonomous and critically reflective learners; he states "If we honestly seek to produce self-directed learners and holistic individuals, we must change our classrooms and embrace strategies such as the

Socratic circle” (p. 23). This approach is complex; as Shulman (2000) wryly informs us, we know that the dominant form of teaching in HE is the lecture because of its relative simplicity. The challenge is to develop pedagogies which encourage students, through dialogue, to reconstruct information in order to internalize it. In discussing legal training, Maclean (2005) suggests that the difficulty students have in ‘thinking like a lawyer’ may result from problems they have in modelling the speaking mode of that profession. It may well be that encouraging students to model the behaviours of successful teachers in fostering dialogue, rather than debate, can best be promoted through this form of Socratic teaching.

References

Armbruster, B. B., Lehr, F., and Osborn, J. (2001). *Put reading first: The research building blocks for teaching children to read*. Washington, DC: National Institute for Literacy.

Retrieved on December 3, 2006 from

www.nifl.gov/partnershipforreading/publications/reading_first1.html

Copeland, M. (2005). *Socratic circles: Fostering critical and creative thinking in middle and high school*. Portland, Maine: Stenhouse Publishers.

Duke, N. K. (1999) and Pearson, D. P. (2001). How can I help children improve their comprehension? In *Teaching Every Child to Read*. Ann Arbor, MI: CIERA/University of Michigan

Comment: Not in references

[Maclean, R.](#) (2005) Socratic teaching, the law and professional identity. Australian Association for Research in Education (AARE). Conference (2004: Melbourne Vic).

Shulman, L. (2000) Teacher Development Roles of Domain Expertise and Pedagogical Knowledge. [Journal of Applied Developmental Psychology](#), 21 (1), pp. 129 -135.

COLLABORATIVE DIMENSIONS OF LEARNING

Connections Labs and the role of the tutor

Mhairi Freeman and Archie Graham

University of Aberdeen

In our previous example we outline our intention to pilot an experimental pedagogy in the form of 'Connections Labs' to enable students to (i) reflect on the habits of the practitioner within another discipline and (ii) value the experience of studying a discipline outwith Education. The following discussion will focus on further developing the role of the tutor in order to support student learning within the first year of the BEd Programme at the University of Aberdeen.

The current role of the tutor was negotiated carefully during the design stage of the Education based course "Learning How to Learn" (ED1028). What emerged was a commitment by the tutors to provide a student experience based on a social constructivist model for learning. Students generate and bring questions to be discussed at each tutorial. The tutor role is to apply professional judgement to determine the level of student engagement with the topic and subsequently adopt an appropriate strategy to scaffold their learning. Consequently, the role of the tutor is to engage in the co-construction of meaning with his/her students, to facilitate discussion, to question and challenge, and to build student confidence in engaging with theories of learning. Tutors exercise flexibility with regard to the timing and type of intervention best placed to support their tutorial group. They regularly and frequently negotiate ways of working with their students and make this explicit through the open display of agreed 'social norms' (McDonald, *et al.*, 2003).

In addition the role of the tutor extends to evaluating the course with a view to improving the student experience. In the case of the BEd Programme, feedback from Year 1 students has highlighted dissatisfaction with their requirement to undertake elective courses outwith Education, for example

I don't know what my elective subject has to do with primary school teaching... Even if I had a tutorial class with other people in primary teaching doing that subject that would help.

Student Course Evaluation Forms, 2006

There is clearly a need for additional tutor intervention to help students make meaningful connections between the experience of engaging with an elective and their aim of becoming a primary school teacher. We do not, however, wish to focus on the content of these

electives and their potential relevance to teaching. Instead, we aim to provide students with a structured approach to enhance their learning,

Among educators, especially, just talking may not be enough. The kind of talking needed to educate ourselves cannot rise spontaneously and unaided from just talking. It needs to be carefully planned and scaffolded.

McDonald *et al.* (2003:4)

Our structured approach will involve the tutor in the design of a carefully constructed protocol which in this case will take the form of appreciative enquiry. The intention is to facilitate the co-construction of an environment that is conducive to students learning through dialogue and critical thinking. The questions and prompts provided will enable students to interview each other and reflect with peers and their tutor. Students will be asked to examine:

- what gives meaning and a sense of purpose for them as learners;
- choices made in relation to their elective;
- the skills, habits and attitudes being fostered within another discipline;
- connections between their elective, learning how to learn and primary teaching.

It is anticipated that opportunities to explore assumptions will arise and that the whole process will be beneficial to both students and tutors.

McDonald, J.P., Moir, N., Dichter, A. and McDonald, E.C. (2003) *The Power of Protocols: An educator's guide to better practice*. Teachers College Press: New York

CREATING INTENTIONAL LEARNING

Geographical Enquiry with Handhelds

Tony Pickford

University of Chester

The use of handheld computers has been embedded in the teaching of primary geography education in the Faculty of Education and Children's Services at the University of Chester for some years. An OFSTED inspection report in 2003 noted: "ICT has a high profile in the college-based training featuring strongly in its own discrete training programme and is also used to link with and support subject teaching. For example, during a Year 2 BEd geography session, trainees used palmtop computers to produce good quality posters" (OFSTED 2003). The computers in this case were *Acorn PocketBooks*. Recent provision of funding by the TDA has enabled these to be replaced by Tablet PCs and the session described here exemplifies how ICT continues to be embedded in teaching and learning about geographical enquiry. The session aimed to provide a meaningful context for handheld or m-learning ('m' for mobile) and support for intending Early Years teachers - Futurelab (2006) notes that 'Without support, teachers may feel overwhelmed by how to approach this new mode of teaching and learning.'

The session began with an introduction to the principles of geographical enquiry in an Early Years context and the centrality of worthwhile questions for investigation. The students were set the task of carrying out an enquiry, to be presented to peers in the form of posters. The enquiry was to be carried at the students' own level with later consideration of its appropriateness for Early Years settings and any necessary adaptations in the content, methodology or process. Students were placed explicitly into the role of learners in a facilitated environment, modelling a teacher as researcher role.

A maximum of two hours was set aside for engaging with the process and presenting findings. The group was then introduced to available technologies that might facilitate both the enquiries and their presentation in a short time-scale. For the group of 15 students, there were six digital cameras, two memory card readers and four *Samsung Q1* handhelds. After initial familiarisation with the hardware, the students discussed the enquiry questions in groups and decided on plans of action. The enquiry questions included:

1. How is land used in the locality?
2. Is the locality tidy or untidy?
3. Where is a new pedestrian crossing needed in the locality?

Because of limitations of time and students' relative unfamiliarity with the locality, questions were posed by the tutor, rather than identified by the students. Issues of learners' ownership of the enquiry process were discussed at this point and it was recognised by the group that constraints of time limited the extent of the activity as a model of practice. The tutor was, however, very much in the role of problem designer, facilitating a constructivist model of learning.

Two groups decided to use the handhelds outside the classroom to gather data in the environment - one carried out a traffic survey in two locations as part of their enquiry into the site for a possible pedestrian crossing; another group gathered data about routes around the campus. A group investigating land-use in the locality downloaded and accessed *Google Earth* in order to gain an overview of the area around the campus. Most groups used the digital cameras to record appropriate images.

Poster making followed on rapidly from the data gathering phase. Data handling software on the Q1s was used to display and analyse results. Photographs were downloaded to the computers and images selected for printing. The posters were assembled, with much discussion of findings and awareness of audience.

When the posters were finished, evaluation of the activity began. Groups looked at each others' posters and identified questions they would like to ask about the investigation or the findings. Questions were attached to each poster with *Post-Its* and groups were asked to respond to the questions raised by their poster. Each group also provided feedback on whether they felt their enquiry was appropriate for Early Years and how they might adapt it for younger children. The discussions ranged over issues, such as the participation dimension of enquiry and the possibility of carrying out classroom-based enquiries with good quality resources. Finally, the students considered the impact that handhelds, and ICT in general, had had on the activity. A list of positive and negative elements was compiled (see below) from the discussion. Overall, the students were enthusiastic about the activity and about the use of handhelds within it. One group member quipped that there had been no negatives to the activity "because we used digital cameras".

The contribution of ICT

Positives

- Digital cameras speeded up the process (giving more time for analysis and interpretation)
- Instant access to digital images
- Handhelds helped in recording data

- Data could be collected straight to the computer
- Handhelds better for young children than laptops
- Promotes collaboration and talk

Negatives

- Paper and pen could be quicker in some circumstances
- Time to practice needed
- Handhelds needed in quantity, which could be expensive
- ICT hardware can break down

Although this workshop has been adapted and refined over several years, it still raises some practice-related questions, for example:

- How might m-learning be integrated into other taught areas of the curriculum, e.g. history?
- How could progression in ICT capability be built into the activity more effectively?
- How might the participation dimension of enquiry - close, framed and negotiated - be included in the session effectively?

The work of Roberts (2003) is particularly significant in the field of geographical enquiry, in that she has identified a participation dimension in the process. Depending upon learners' involvement, an enquiry may be defined as closed, framed or negotiated; with the last of these indicating the highest level of learner participation. An enquiry might display different levels of participation at different stages, however, and the gradual handing over of more of the process to learners is a key indicator of progression in enquiry-led learning. The session is particularly effective in generating discussion about the participation dimension, but there is scope for further exploration – perhaps, through the setting of group tasks that are constrained by different levels of participation; from a tightly structured closed enquiry into land-use, say, to a negotiated enquiry, in which students identify their own question and plan their own investigative process.

References

- Futurelab (2006) *Learning with Handheld Technologies*. Bristol: Futurelab
 Roberts, M. (2003) *Learning Through Enquiry*. Sheffield: Geographical Association.

REFLECTING ON CONDITIONS FOR SECOND-ORDER LEARNING

The student in transition: developing a professional identity

Annie Fisher

University College Plymouth, St Mark & St John

A recurring debate within the context of ITT is the issue of 'real learning' only taking place during placement. This is not unique to the United Kingdom. According to Louden and Rohl (2006, p. 66) many Australian pre-service teachers talk of their university course in terms of 'too many theories and not enough instruction', citing in particular their frustration in being asked to write in response to 'what is literacy?' rather than being helped to understand the pragmatics of putting together a reading programme. In order to look more deeply into students' perceptions of their journey to becoming a professional, the voice of one third year undergraduate student was sought.

As my personal student, 'Mandy' had often expressed dissatisfaction about aspects of her university course, but the third year appeared to have brought about some changes in her perception of her place in making the link between theory and practice – praxis. Although Mandy, too, believed that true learning takes place during placement, she was able to articulate her emerging belief that this relates to *contextualisation*, and is often retrospective. The most effective teaching within sessions, she believed, was dialogic; this opened opportunities for discussion and debate, creating space for students to form and express their understandings. This was most successful when linked to prior reading, and, unlike Louden and Rohl's (2006) findings, related to *issues*, rather than pragmatics such as planning. Surprisingly, Mandy did not dismiss the idea of whole cohort lectures as effective means of learning, although she stressed that this very much depended on the lecturer and their mode of delivery. The most successful lectures focused on ideas and issues; gave space for thinking; allowed time for small break-out group discussion; were not read verbatim from Powerpoint and did not assume ignorance on the part of the listener.

It could be argued that Mandy is not a typical student, but she is usually as quiet in seminars and lectures as her peers, and frequently takes no notes; as a tutor it is easy to assume she is not engaged with the process of developing her own learning. Only my relationship with her has allowed me to find out her passion for enquiry-based learning; the links she has made for herself between dialogic teaching, collaborative learning and assessment. As Mandy says, differentiation may be difficult to achieve in HE, but a belief that students learn from being read to, and the assumption that they will not have engaged in reading for

themselves, does nothing to challenge an epistemology which believes that knowledge is fixed and 'out there', and as is as reductionist as any mandated and compartmentalised curriculum.

Louden, W., and Rohl, M. (2006) "Too many theories and not enough instruction": perceptions of preservice teacher preparation for literacy teaching in Australian schools. *Literacy*, 40(2), pp. 66-78.

Reflecting on practice

The final section of this publication comprises a series of questions, and cues, for reflecting on practice. Before that, we include an example of the way in which one university set up a forum for discussing, and revising, practice.

Networking at the Creativity Café: Sharing knowledge around creativity in teaching

Josie Harvey

University of Huddersfield

Since May 2007 a TQEF (Teaching Quality Enhancement Fund) project on Creativity and Innovation in Teaching in Higher Education has been running at the University of Huddersfield, based in the School of Education and Professional Development. The purpose of this project has been to develop and promote creative and innovative teaching of academic staff across the University.

One of the major findings has been the recognition that extensive creative and innovative teaching is already taking place, but at present staff know little of the developments in their department, let alone elsewhere in the university. Creativity Cafés have been organised to offer an opportunity for academic staff to network informally, and to share knowledge with colleagues around creativity in teaching. The positive feedback from these events has been overwhelming, and the sharing of good practice has encouraged staff from different disciplines to network, as well as enhance their own professional development.

Building the Café

Initial meetings with over 40 academic staff took place to identify innovative and creative pedagogy across the University. It emerged that the main motivation for teaching creatively was to engage students in their own learning, providing them with skills and experiences to help prepare and equip them with transferable skills for an ever-changing world. Most staff wanted to be involved in networking and sharing creative ideas with colleagues across disciplines. Therefore, the 'Creativity Café' was born.

The aim of the Café was to provide an informal but constructive day which had a creative and innovative approach. The 'mood' was set by tables arranged in 'bistro' style, with tablecloths, candles, flowers and a menu outlining the agenda for the day. The facilitators were 'table waiters' dressed in black and white uniforms helping to 'spill' ideas from the group onto the tablecloth and then feedback. One of the Café rules for 'diners' was to sit

beside someone they did not know and offer them 'business cards'. This encouraged everyone to make at least one link during the day and to network afterwards.

The menu began with 'Starters' providing introductions and aims, followed by 'Entrees', short talks given by a selection of practitioners presenting their own creative teaching approaches. Often these talks were followed up as the topic for a table. For example, at one Cafe on Creative Teaching Techniques, the topics included: use of music and games; use of metaphor; and the difference between creative teaching and creative learning.

During 'Mixed Grill' 'diners' got the opportunity to select a table, introduce themselves, and share experiences and ideas around the chosen topic. After 30 minutes, they moved to a different table with a new topic to discuss. The 'waiters' stayed to capture the discussion from the new group, and at the end of the next 30 minutes fed back to the whole Café. Points were recorded and distributed to the delegates after the event.

Reflections on the effectiveness of the Creativity Café

As staff had chosen to come to the event, many already had an interest and expertise in creativity in teaching. A number were teacher trainers who wanted to learn from others for their own professional development, but also to use the ideas with their own students.

The Creativity Café was well-received and the opportunity to network and discuss their ideas around creativity in teaching was positively welcomed by the delegates. Examples of comments were: 'sharing and learning from others' and the possibility of 'networking opportunities'. One improvement to the day could have been to 'give more time to discuss good practice already in existence'.

The benefits, or otherwise of the Creativity Café, and the way forward

The benefits of the Creativity Café have been notable, especially the support offered by peers, and the opportunity and willingness to network with other staff across the University. The Café has also helped the staff's own professional development. This supports the work of Senge (1993) where spaces such as this contribute to the breaking down of boundaries between different parts of the organisation.

This study has presented a very positive view of the Creativity Café and its benefits, but there are issues to consider. Although staff are keen to share ideas, there is the cost and time involved in bringing them together.

Furthermore, developing creativity in the classroom often means taking risks. In an education system that is increasingly measured by targets and results, how many staff would prefer to follow safer options rather than risk failure?

This study has focused on one finding of the project, which was that many academic staff wanted to share their ideas around creative teaching and network with others across the University. The Creativity Café was created to provide an informal, yet constructive setting. It gave the opportunity for teachers to reflect, challenge and learn about their own knowledge of creative teaching, both for their own personal development, and for the enhancement of creative thinking amongst their students too.

References

Senge, P. M. (1993) *The Fifth Discipline: The Art and Practice of the Learning Organisation*. London, Century Business.

Staff development activity: considering the learning environment and student involvement with learning

This concluding section offers a number of key questions, or reflective cues, based on Bransford, Brown and Cocking's notion of an enabling framework for learning discussed earlier (pp 21 -22) . These may be used in a number of ways to stimulate departmental/school/faculty discussion about

1. The way in which strategies are currently used to involve student teachers in developing their own learning.
2. The way in which learning environments are established to optimise students' capacity to learn.

Analysis of the resulting discussion may indicate, for example, a need to develop shared tutor (and student) understanding of key learning vocabulary; to change assessment procedures in order to foreground AfL (Assessment for Learning); to redesign modules in order to understand, and work with, the trainees' existing epistemological development. Above all, this is designed as a flexible tool to enable practitioners to articulate their beliefs and philosophy regarding the development of L2L. As a precursor to this activity, those leading this examination of practice may wish to use the questionnaire in Appendix 1.

Key questions:

Constructing a learner-centred environment

1. What strategies are used to ascertain learners' pre-existing subject knowledge, including potential misconstructions?
2. What strategies are used to ascertain learners' personal beliefs about knowledge and their conceptions of learning?
3. What strategies are used to develop their beliefs about knowledge and conceptions of learning?

Creating a knowledge-centred environment

1. How are subject/discipline-related thinking skills and techniques introduced and developed?
2. What strategies are used to develop learners' understanding of the particular epistemology and language of the subject/discipline?

3. What opportunities are available for the learners to reflect upon their individual thinking skills, and their ability to transfer knowledge to new contexts, or to develop new knowledge structures?

Creating assessment-focused environments

1. What assessment and/or evaluation opportunities, including self-assessment, peer assessment, formative and summative assessment, are used for the purposes of:
 - motivation
 - informing
 - providing feedback
 - facilitating learning

Creating community-centred environments

1. How do you become aware of the reasons for students choosing your programmes?
2. In your experience, what are the principal factors influencing learners' choices?
3. What, in your experience, are the principal barriers to learners' participation, and their development, once they are on the course?
4. What, in your opinion, characterises successful learning communities?
5. What strategies are used to encourage the development of learning communities, and how do these facilitate the development of new knowledge?

Departmental areas for development/strategies for developing an enabling environment

Appendix 1

Teaching for Learning Questionnaire

The purpose of these questions is to allow time and space for you to reflect on your beliefs about teaching and learning in HE. These will be used to initiate discussion on the staff development day.

Following that, it is intended that the responses will be collated anonymously and distributed to all tutors, allowing us to move forward with a shared understanding of what we all mean by teaching and learning.

Please take time to read all the questions before you answer.

Answers may be as brief or as detailed as you wish, but please engage with all questions.

1) What have been the main influences behind the teaching and assessment strategies you use in your sessions?

2) Teaching strategies in your sessions

a) What strategies do you use to meet the learning needs of the different students in your groups?

- b) Are there any other strategies which you would like to use, but are currently unable to?
If there are any particular factors preventing you from using these strategies please jot them down?**

- 3) Assessment strategies in your sessions**
a) What assessment strategies do you use?

- b) Are there any other strategies which you would like to use, but are currently unable to?
If there are any particular factors preventing you from using these strategies please jot them down?**

4) To what extent do you think the curriculum content of our degrees are flexible?

5) What do you think our strengths and weaknesses are in relation to teaching, learning and assessment?

6) **How would you describe your philosophy of teaching and learning? Be as brief or as expansive as you wish!**

Note: A personal philosophy of teaching statement should describe thoughts on:

1. **How learning takes place.**
2. **What teaching is.**
3. **Goals for students.** Why are you doing what you are doing? What do you hope your students will get from your efforts?
4. **How your philosophy is enacted in your practice.** This is your chance to talk about what you do, or plan to do, to make your philosophy real