

EMERGENT CONCEPTIONS OF ENQUIRY-BASED LEARNING

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Introduction

This chapter is based on a project that had three main aims. As stated in the bid document, these were:

- To improve student learning by deepening the learning experience to emphasise intentional ‘learning to learn’, so enabling students to become self-directed learners.
- To support staff as they evolve conceptions and practices in teaching and learning that are enquiry-based, and to map lines of development between current and more enquiry-based practice.
- To enhance knowledge of how to transfer educational developments through an evolutionary approach to introducing enquiry processes.

In this chapter we will:

- Outline the project;
- Explore the way that conceptions of ‘enquiry-based learning’ (EBL) evolved during the project;
- Comment on the impact of the project at Surrey and learning about educational change.

Learning to Learn (L2L)ⁱⁱ was a 2-year projectⁱⁱⁱ at the University of Surrey starting in January 2005 under the UK HEFCE Fund for the Development of Teaching & Learning Phase 5 (FDTL5). The project was centrally concerned with developing enquiry skills among undergraduate students. It promoted innovation in educational

practice through supported enquiry-based learning (EBL) by seeking out examples of existing creative and dynamic teaching at Surrey, then further developing the ways in which students were encouraged to enquire, thus supporting them as they `learnt to learn. Specifically, the project sought to embed `learning to learn' in five modules across three disciplines; Health and Medical Sciences; Biological and Molecular Sciences; Management. The modules were diverse, yet shared an emphasis on developing skills of professional practice.

Enquiry-Based Learning: Initial Conceptions

EBL^{iv} and related pedagogic theories and practices have become prominent in higher education. Discourses of EBL appear nationally and internationally, for example in The Boyer Commission report (1998), and in disciplinary contexts such as health (Price 2001), (Bebb & Pittam 2004). Several of the UK Centres of Excellence for Teaching and Learning (CETLs) established in 2005/6 that had an explicit EBL focus formed a `Learning Through Enquiry Alliance' (LTEA)^v, which included The Surrey Centre for Excellence in Professional Training and Education (SCEPTre)^{vi}.

EBL takes diverse forms, and its definition and relationship to other educational practices (notably Problem-Based Learning, or PBL) are contested. This project began with a distinctive notion of EBL that was broadened for the L2L project, yet remained influential and held particular challenges for mainstream teaching and learning (and vice versa). The source of this conception was an innovative, experiential Masters programme for post-experience facilitators, coaches and consultants, called the MSc Change Agent Skills & Strategies (CASS) that began in 1992. It was the inclusion of this programme in the Subject Review of Education at Surrey in 2000 that qualified the (then) School of Educational Studies to bid under the FDTL5 scheme.

The roots of this programme lay in a tradition of humanistic education at Surrey initiated in the 1970's by the philosopher John Heron (Heron 1999). Hence the CASS programme had a humanistic ethos with an explicit goal to develop self-directed learners and practitioners (e.g. Tosey & Gregory 1998). Its teaching and learning strategy was predicated on experiential enquiry between peers, and on the intentional

development of skills of 'learning to learn'. There was a strong emphasis on developing the 'emotional competence' (Heron 1992) of participants. The CASS programme also utilised a radical form of face to face, self and peer assessment that had been developed as a tool for professional education at Surrey over many years (Gregory 2002).

In short, it was significant that the CASS programme's notion of *enquiry* predated contemporary usage in HE. It was taken instead from a radical discourse of research known as 'human inquiry' (Reason & Rowan 1981) that, in its emphasis on (for example) self-knowledge, first-person enquiry and action research, appears in tension in various respects with economic and quality assurance-driven imperatives of HE today.

For the L2L project, this conception was linked to a discourse of complexity. Thus in the bid document referred to a 'world of practice in the 21st century... characterised by uncertainty and complexity' and 'increasing emphasis in HE on the need to develop self-directed practitioners who can engage in enquiry, in order to navigate their way through such complexity and take meaningful action.'

EBL is also relevant to debates about research-based teaching (Jenkins et al. 2003), though the L2L project acknowledged rather than elaborated this connection.

In summary, the stance taken by the project was to describe certain characteristics of EBL, and to encourage leaders of the selected modules, in particular, to enhance these features.

Evolving conceptions of EBL

When L2L began we felt the need to provide a working definition of EBL. This became:

'... a process of learning in which the learner has a significant influence on or choice about the aim, scope, or topic of their learning; AND attends intentionally to, learns

about, and is guided or supported in, the process of learning. This process of learning draws upon research skills and study skills, but enquiry is not reducible to either research or study.' (Tosey & McDonnell 2006)

We resisted the temptation to define EBL as a singular practice, however, preferring to delineate a framework of characteristics (Tosey & McDonnell 2006) to indicate a family resemblance rather than a pre-determined model. For example, we suggested that EBL would be characterised by a context in which the student frames the 'problem' or subject of enquiry, compared with PBL, in which the teacher defines the task. However in an HE setting there is always, we would argue, a level at which enquiry is teacher-led, however tacitly.

One view might be that the L2L project watered down the CASS conception of enquiry and potentially lost its radical edge. Alternatively, one could say that L2L sought to make the emphasis on enquiry more widely accessible, recognising that it was unrealistic to transfer the notion wholesale from a specialist postgraduate source into mainstream undergraduate education.

In fact there was some evidence among students of increased awareness of emotional competence:

'I gradually started to 'come out of my shell' and contribute more to discussions and made sure my ideas were being considered. This was not easy for me because I am not normally very forthcoming and I prefer to listen to others rather than to participate but in this particular project, I felt I had to step in before disaster materialised. It has done the world of good for my self confidence'

What L2L did retain was a commitment to the idea of 'learning to learn' as a higher order capability. Thus the bid document referred to 'the generic criterion of improving metacognitive skills in the curriculum'.

Next we explore the way the conception of EBL appears to have evolved at a number of levels.

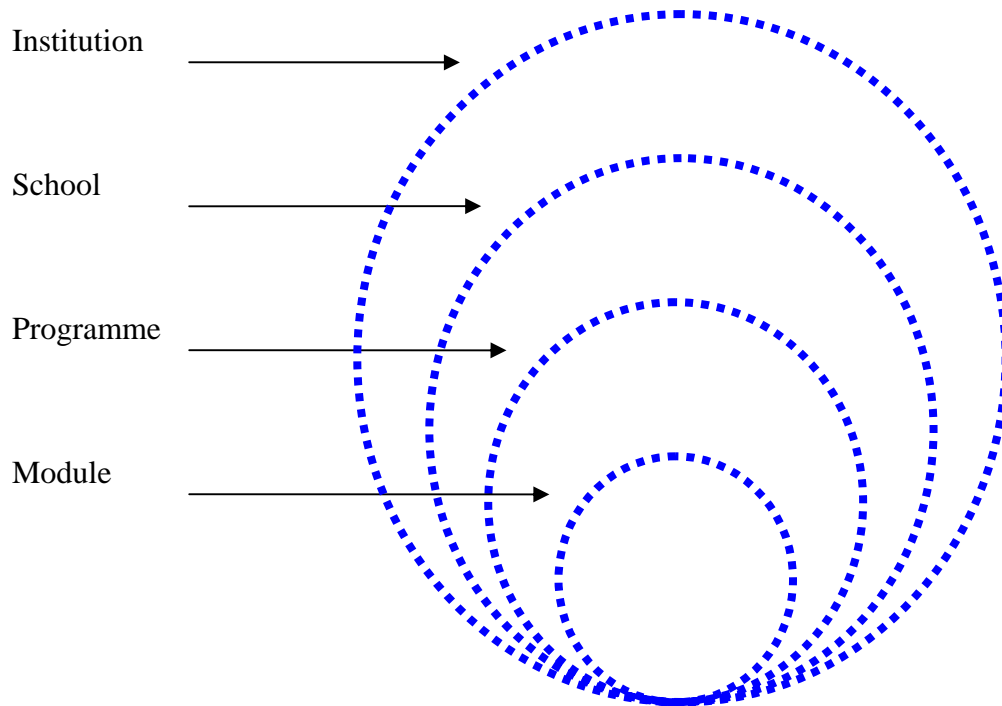


Figure 1: Levels of system

Module level: the case studies

The five module co-ordinators began with a commitment to student learning and to the notion of enquiry. The following table summarises the emphasis of each development (as we perceive it in retrospect):

Module	Emphasis of EBL development through L2L
Events management	Facilitation of reflective learning to elicit value from the experience of creating and managing a real event. Staff-intensive, focusing on individual reflective interviews with some 80 students.
Nursing 1	Developing practice-based mentors' capacity to support student learning from placement.
Nursing 2	Enhancing an existing problem-based learning module guided by a professional discourse of EBL.
Dietetics	Developing facilitation skills among associate tutors; especially to enhance their capacity to tutor groups and to discourage reliance on an information-giving style of tutoring.
Organisational Change	Encourage student enquiry into real, complex situations involving organisational change; and engaging students in a creative process.

Table 1: The five L2L modules and their emphasis on EBL

For staff, facilitation became a leading theme. We organised a regional workshop on facilitation 12 months into the project, which highlighted two things. First, it appeared that facilitation was a relatively unfamiliar notion and practice to many HE teachers. Second, facilitation is diverse and complex. We attempted to provide input on the day for staff who, in terms of experience with facilitation, were at beginning, intermediate and advanced levels. This proved to be quite a stretch, and illustrated that different conceptions of facilitation existed^{vii}.

There were tensions too, such as recognising how EBL can conflict with curriculum, structures, systems and resources. Three of the five modules involved intensive face to face tutoring of students. In one case this was provided by existing associate tutors

who were trained in facilitation by L2L; and in two cases L2L project staff acted as tutors to add to the teaching resource.

There was also some evidence of changes in the conception of teaching and learning held by students.

'The thing that sticks in my head about this module is the [Module Tutor saying] ... that we should question how we approach knowledge. For the last three years we were being told that this is black and this is white and this is what you're going to learn. Who's to say that is right? Because that is one person's interpretation ... through that [enquiry] mode of learning you question what you perceive knowledge to be. Appreciating that it's not black and white, you can question it ...'

Students appreciated a module design which allowed for creativity and choice, and were able to consolidate learning from and for practice placements.

'I prefer the practical side of modules completely. If every module had that interactive element of doing something creative not necessarily for assessment but something where you got together and talk, whereas in lectures you sit there in silence and you get told something and you go away'.

Other comments expressed reservations about EBL. For example:

'I just like straight lectures, because then you feel you are learning stuff'.

'I do not rate EBLs very highly. I feel the time spent on EBLs could be more usefully spent on learning about diseases and acquiring practical skills. We receive very little feedback about either the content or our presentations or our presentation skills. The EBLs to date have not been marked so students who have contributed minimally to presentations have not been penalised for their limited input. I feel I have gained very little from EBLs which will assist in my day to day practice as a nurse'.

In the latter case the language used was especially interesting, since EBL had become concretised and nominalised as a thing (i.e. doing 'an EBL'), as distinct from being talked about as a process.

Programme

Something that seemed to us to be common across all five applications was the 'light' pedagogic philosophy at programme level, in stark contrast with the strong programme ethos of the MSc that was the basis for L2L. No doubt this was influenced at least in part by the modular design of the undergraduate programmes; the CASS programme, while formally comprising modules, was conceived of as a whole programme for single cohort led by an explicit educational philosophy.

School

There were also interesting contrasts between Schools. One School had an explicit strategic commitment to EBL, linked to a clear disciplinary 'language' of EBL. The key champion for engagement with L2L operated in a strategic role within the School (although this role no longer exists). In this School the sense of engagement with the project was strong from a strategic level, and initially the major task of the project seemed to be one of how to create effective EBL in practice in modules. This changed over the course of the project. We facilitated two staff development seminars to explore notions of EBL, in which there was strong level of interest from participants and a lively discussion and engaged debate. Two Module Tutors gained significant professional development through their engagement in the project.

By contrast, a second School had what appeared to be strong examples of EBL practice yet EBL appeared not to be significant at School level. There was no disciplinary discourse of EBL, and while EBL potentially met some current needs (e.g. improving student feedback), it was also perceived as a specialist and resource-intensive approach pursued by enthusiasts, not a universally applicable method. The School has very large student numbers, hence has a strong interest in innovations that

are resource-efficient. Overall it appeared that EBL did not represent a 'solution' to a 'problem' that was on the School's agenda.

Institution

The organisational arrangements for the project were designed to ensure that it linked with the key mechanisms for the support for learning developments in the University. Notably, the chair of the Project Steering Group was the Pro Vice-Chancellor responsible for learning and teaching. Other members were the head of the Centre for Learning Development (CLD) which provides support for academic staff, and the head of SCEPTRe.

These arrangements provided fairly direct routes for the experiences from the project to inform practice and strategy in the University. For example:

1. The annual learning and teaching symposium organised by CLD and overseen by the University Learning and Teaching Strategy Group regularly included presentations relating to the project.
2. EBL, including outcomes from the project, is included in the programme is taken by all newly appointed lecturers.
3. In addition to its focus on professional training, the other key strands of SCEPTRe's work relate specifically to EBL. Many of the projects undertaken by academic staff with the support of SCEPTRe have related directly to EBL and a number of L2L module leaders were in the first cohort of SCEPTRe Fellows.

These and other activities took place in the context on the University's learning and teaching strategy. The overarching strategy developed in 2007 for the period 2007-2017 refers to students being given 'opportunities for full engagement in the planning and development of their own learning' and students being 'at the centre of its learning and teaching strategies'. Within this a specific activity for 2007 was linked to the L2L project, expressed as 'continue to develop an enquiry-rich curriculum and

immersive learning experiences building on the strategic work of the L2L and SCEPTRe projects’.

The review of actions against this item for 2007/08 included 10 new enquiry-rich curriculum innovation projects, 20 staff from all four faculties being involved in a new enquiry-based learning initiative, a national conference and 60 immersive experience stories from staff and students. For 2008/09 the actions in support of the strategy continue to seek to ensure that ‘students are engaged as partners in the process of developing and enhancing their learning’. This focus on the students as partners is noted in the 2009 academic audit conducted by the QAA which commends as good practice the ‘institutional drive for cultural change towards an increased focus on the quality of student-centred learning’.

During the period of the L2L project the University was being restructured. The outcome was the creation of four faculties with each having an associate dean responsible for learning and teaching and a separate learning and teaching committee. This had both positive and negative effects on developing the outcomes of the project. The University now has a much more transparent and obvious process for the development and implementation of strategy, with Faculty learning and teaching strategies being developed in the context of the University strategy and with associate deans having broad oversight of the developments within their faculty and reporting to University committees. At the same time the faculty structure has permitted the appointment, from the academic staff, of four CLD Faculty Scholars supported by central funding for a part of their time to encourage scholarly approaches to learning and teaching. In the medium term these sorts of changes will assist the development of strategies such as those related to enquiry-based learning. However, in the short-term, while the faculty strategies have been under discussion and while the new organisational arrangements have been in the process of development some of the initiatives have been held back, a point which is also acknowledged in the 2009 QAA audit report.

In summary, EBL has a continuing institutional presence and ‘enquiry’ has become part of the language of learning and teaching, for example through the CETL:

‘An important educational goal for SCEPTRe is to advance understanding and facilitate further development of collaborative, enquiry-rich processes for learning that will enable students to develop their capabilities as critical and creative enquirers.’^{viii}

Conclusion

In summary, the conception of EBL appears to have evolved as follows:

Level	Emergent EBL:
Module	<ul style="list-style-type: none"> • The project led to diverse local innovations and what ‘EBL’ meant to students varied – for some it was a process, for others a product; • EBL appeared to be highly dependent on the commitment of individual module tutors; • Staff emphasised facilitation as a central skill involved in EBL; • Some students thrived, and welcomed EBL as liberating, while others disliked it or were anxious about EBL.
Programme	<ul style="list-style-type: none"> • EBL may or may not link to a programme pedagogy.
School	<ul style="list-style-type: none"> • EBL may or may not link to a disciplinary discourse of EBL; • EBL can be taken up as a strategic/political development, or as local/tactical innovation; • EBL may or may not meet a perceived need.
Institution	<ul style="list-style-type: none"> • EBL has appeared in ‘high profile’ texts such as institutional strategy and the remit of the institution’s CETL, has received favourable comment in QAA reports, and has figured in recognition of the institution (NTF, CETL); • EBL has been highlighted through institutional recognition of individuals for learning and teaching; • At Surrey EBL has become most identified with the notion of learning for complex professional worlds (linked to Surrey’s professional training agenda), and less so with research-led teaching.

Table 2: issues and outcomes at four levels of system

Impermanence is also a theme. Many members of the project team have left the institution, or have changed role. The MSc CASS programme had its final intake in 2006. Of the five modules in the project, one has been expanded to a 20 credit module to recognise the EBL, and one is being merged as part of a restructuring of the entire final year of its programme.

Finally, as a stated focus of L2L project was on conceptions of change, from the start we questioned the notion of `transfer' as the guiding metaphor for change (`Transfer' = to carry). Fullan (1999: 64) says: "There is really no such thing as easy product transfer in social reform. Innovation is not a pill, a widget or a silver bullet. . .". In a similar vein, Elton (2002) has questioned the concept of `dissemination' in HE, arguing for an approach to change informed by Organization Development (OD). Elton says: `It is argued that the major reason for the at least partial failure in the dissemination of teaching innovations lies in the uni-directional approach used and the reliance on dissemination through education, both of which are in conflict with well established change theory...'

We therefore came to conceive of the key challenge not as one of `transfer' (of an entity) from one context to another, but instead of how the local emergence that already exists could be amplified. `Emergence', a core concept from complexity theory (Goldstein 1999), has been defined as '...the process by which patterns or global-level structures arise from interactive local-level processes. This "structure" or "pattern" cannot be understood or predicted from the behavior or properties of the component units alone' (Mihata 1997:31). It has been applied in education by Cooper et al (2004), Davis and Sumara (2006), Fenwick (2003) and Haggis (2004) among others.

Hence we can conceive of the project as a catalyst for the emergent idea or `meme' of EBL. This is not to suggest that L2L itself was a major factor in what emerged; as noted, EBL became prominent in national HE discourses especially through CETLs. The fact that EBL persists and continues to evolve in the institution probably provides the most significant evidence of impact.

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ⁱ We acknowledge the contribution of others in the L2L project team, especially Dr Andrew Comrie and Dr Mary Dickinson, to this project.

ⁱⁱ <http://www.som.surrey.ac.uk/learningtolearn/>

ⁱⁱⁱ It was extended and became a 30 month project. The project delivered its final amended report in November 2007.

^{iv} Whether IBL (inquiry with an `I`) or EBL (enquiry with an `E`) appears to be arbitrary.

^v Manchester, Sheffield, Reading, Surrey, Warwick/Oxford Brookes, Gloucestershire), <http://www.itea.ac.uk/>, accessed 30th June 2008

^{vi} <http://www.surrey.ac.uk/sceptre/>, accessed 6th June 2009.

^{vii} Materials from the event are still available via the SCEPTrE website:

<http://www.surrey.ac.uk/sceptre/EnquiryLearning.htm>, accessed 6th June 2009.

^{viii} <http://www.surrey.ac.uk/sceptre/criticalcreative.htm>, accessed 3rd June 2009.