Inquiry-based Learning Design Overview

Learning to Teach from Inquiry into Learning
King’s Learning Institute, King’s College London

1. The students and the curriculum

The “students” of this project include primarily, the teacher/researchers who are already faculty at King’s College, but must complete the Postgraduate Certificate in Academic Development (PGCAP) as a condition of probation. The PGCAP programme is therefore the significant curriculum context of the report. But at a secondary level, all these academics teach their own students according to other disciplinary curricular, and since part of the work entailed learning by about learning & teaching through research of student learning in its immediate curriculum context (i.e. in situ), the report also concerns the work of undergraduate students in History, Classics, Neuroscience and other subjects.

2. The teaching and learning aims

As a whole, the purpose of the project was to foster inquiry based approaches to teaching in a disciplinary context – modelling learning research during teaching, both in situ and by proxy (by encouraging teacher/researchers to learn about student learning using the first order data collected by others in their own teaching). The specific Learning Objectives for the primary curriculum were as follows:

- To develop a critical understanding of what is meant by learning in the context of higher education;
- To evaluate psychological and sociological factors affecting students’ learning in higher education;
- To develop a critical perspective on theories of student learning in higher education.

3. The inquiry/ inquiries

Two levels of inquiry comprised the methods/approaches of the project. First, the first order inquiry into student learning done by a small group of academic teacher/researchers in the normal course of their teaching. Second, the second order use of this data by other faculty. The methods of learning research used in the first order study comprised both: 1) the use of concept mapping as a means of assessing student prior-knowledge and then of testing cognitive change and or the correction of specific misconceptions in the course of the teaching (see Hay, D.B., Kinchin, I.M. & Lygo-Baker. (2008). Making learning visible: the role of concept mapping in higher education. Studies in Higher Education, 33 (3), 295-311); and 2) the more detailed analysis of student’s locution of their subjects of inquiry (see Hay, D.B., (in press), The function of imagination in university student learning: theory and case study data from third year neuroscience, Psychology: The Journal of the Hellenic Psychology Society, included as an appendix to this report). The second order inquiry schedule was part of formal teaching on the PGCAP programme (see above) and required teacher/researchers to use the first order data to problematise learning in the following ways:

1) To write feedback on the students work as if they were teaching these students themselves.
2) To compare and contrast the feedback written by several different participants and to extract some general principles about what it might mean to do learning research in situ as well as how this might be used to improve feedback quality *per se*.

3) To compare and contrast the approaches to learning “as cognition” and learning “as developing literacy/locution” across a variety of disciplines, and thereby extract generality about teaching and learning theory and the development of higher education pedagogy.

4. The assessment

The assessment was also at three levels.

1) First, a series of case study interviews with a small number of participants in the first-order data analysis as well as interviews with some of the undergraduate students that were party to the learning research in the course of their teaching.

2) Second, group discussion in the teaching context of the PGCAP programme.

3) Third, deliberate discussion between the project author and another (Simon Lygo-Baker), in order to surface what did and did not work (see below).

A further analysis of the impact of the second order inquiry schedule will also be done when the teacher/researchers participating in the PGCAP programme submit their work for assessment, but since this will not be until the end of 2010, this assessment cannot be reported here.

5. The ‘process support’

The learner support for this project was likewise at two levels. First, research support given to the teacher/researchers involved in the first order data collection and their learning from it. Second, support in the course of teaching for the second order learning through inquiry into data obtained by these others.

6. The information resources and strategies

The information and resource strategies for this project included the following:

1) Providing a series of academic papers about learning through inquiry

2) Providing a series of papers about methods of learning research in the course of teaching

3) Providing references and web-based resources about feedback and assessment

4) Providing the first order data (for learning at a second order-level) via the web site (see, http://www.dialogueonthepage.com) and in paper based materials.

7. The tutoring/facilitation approach

The tutoring/facilitation extended to collaborative research in the collection and analysis of first order data and to teaching and tutorial support in the second order learning by inquiry process.
8. The learning technology

The website repository of first order learning data was the technology deployed to support this project (see: http://www.dialogueontheedge.com).

9. The learning spaces

The ‘learning space’ of this project was the dialogic context of university teaching and/or the curriculum space of the PGCAP programme.

10. What really worked

The first order level of learning by inquiry was enormously significant, both in terms of the learning about teaching for individual academic teacher/researchers, and in terms of the impact that this had on the quality of their own students learning experience. The second-order design schedule, however, was much more vicarious. Some teacher/researchers liked it as a ‘learning experience’: others did not; suggesting that “learning from other teachers research of their students’ learning is largely irrelevant to their own teaching context”.

These results reflect some of the general issues of teaching for academic development where tensions exist between perceptions of university pedagogy per se, and a disciplinary locus to teaching and learning at university. Nevertheless, the work (and its assessment) advances these debates and the dissemination strategy (below) will develop the findings so that the inquiry based approaches of this project are shown to contribute to what are also pressing issues in the development of “professional teacher status” for academics.

11. Things to build on and/or do differently next time around

The success of the first order inquiry approach, versus deployment of this data for second order learning purpose, is to suggest that in the future, all the inquiry based learning in this context should be directed towards getting teacher/researchers to research their students’ learning in situ. Then the data that they themselves have vested interest in might be used to shape presentations to others but while these others too can also present their own original findings. Then comparison at a meta level, may be engaged in more sincerely.

12. Advice to others doing a similar project

Pursue the first order perspective rather than the second order one.

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