

Reflective Learning in Geography, Earth and Environmental Sciences

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End of project report

Introduction

Recent developments in higher education, including the development of transferable skills, a learning outcome approach to curriculum design, subject benchmarks and the introduction of personal development planning, have stressed in varying ways the importance of reflection in learning. As a result, the Geography, Earth and Environmental Sciences (GEES) Subject Centre project on reflective learning was both timely and apposite. The project sought to investigate the appropriateness and application of reflective learning in the GEES disciplines in HE institutions in the UK, to trial test a range of reflective learning approaches, and to produce an on-line guide to reflective learning.

The project consisted of three parts:

- A review of the literature and consultation with our advisors: Jennifer Moon and Mick Healey
- The distribution of a questionnaire on reflective learning to GEES Departments in the UK and subsequent analysis of the returns
- A trial test of reflective learning exercises in a Level II research methods module at the University of Gloucestershire.

This report contains a brief overview of each part, including its contribution to the overall outcomes and output of the project. To date two outputs have been realised, and a further two outputs are in draft form. Most project work was conducted in 2001 but, as will be seen, some work has spilled over into 2002. In fact, further work may be forthcoming since the project team acknowledges that the embedding of reflective learning and 'practices' is currently an important curriculum policy issue in HEIs.

Literature review and consultation

A considerable amount has been written about reflection and reflective learning. Reflection is an essential element in Kolb's cycle of experiential learning (1984). His work has been taken up, amended and extended by various people including Boud, Keogh and Walker (1998), Cowan (1998) and Moon (1999) as well as many others. However, there is a limited amount of literature directly related to the GEES disciplines. This is probably indicative of the fact that reflection is either taken for granted in these disciplines, or it is not seen as something to be analysed or emphasised.

Discussions and readings on how reflection can be embedded in the curriculum proved to be vitally important throughout the project, but especially significant in the early stages. Jennifer Moon gave invaluable advice and drew the project

team's attention to both the role of educators as facilitators in reflective learning, and how one aims to encourage learners to move from surface to deep learning.

Questionnaire and Responses

A questionnaire was drafted, piloted, amended and dispatched early in 2001. The project team decided to use a postal rather than electronic questionnaire. In hindsight the latter might have been more appropriate. The distribution list came from the Subject Centre – their contact mailing list of early 2001. This list might not have been the most appropriate because the people targeted may already be committed to pedagogic research in the GEES disciplines through their expression of interest in the work of the Subject Centre. The strength of the mailing list is that it did cover all GEES disciplines.

The questionnaire consisted of a series of closed and open questions. Respondents were able to tick more than one box in most closed questions. A response rate of 29% was considered good, although one would dearly like to know what the other 71% thought. It is interesting to note that 29% of all responses came from interdisciplinary/multidisciplinary Departments/Schools.

Questionnaire results reveal that reflection occurs throughout undergraduate programmes but is seen as particularly important at Level III. A wide range of activities are used to promote reflection, ranging from work placement diaries, dissertation sessions, tutorials, fieldwork activities and qualitative work. Analysis of the written responses to the open questions which asked about the relevance of reflective learning has been most enlightening and thought provoking. The questionnaire itself provoked some fervent responses; emotions ran high. Three respondents seemed to be passionately opposed to a study of reflective learning, while many respondents were obvious advocates of reflection and some 'wished' their colleagues would be as well. Knowing how to operate in a Department/School with diverse staff opinions is a challenge many academics face.

Several respondents did supply examples of good practice and some of these were used as the basis for workshops at the Time to Reflect conference. Other examples appear in the on-line guide.

Trial test of reflective learning exercises

The University of Gloucestershire runs a modular degree scheme and the trial test of reflective learning exercises took place in a Level II module on research methods. Seventeen programmes of study are offered in the School of Environment including Environmental Science, Geology, Geography, Environmental Management, Community Development, Heritage Management, Landscape Architecture and Garden Design. The module: EL202 Investigative Methods is taken by all major and joint students studying in the School. Students study two units within the module, each unit running for six weeks. Pilots of various reflective learning exercises occurred in Semester 2 of 2000/2001; in fact some units already incorporated reflection; others had to be developed. This development opened up a healthy debate within the project team and module teaching team as to the merits of the

implicit or explicit promotion of reflection in learning. By Semester 1 of 2001/2002 all units have offered some element of reflection.

Project outputs

- Interim report
- Conference paper presented at the 2nd skills conference at the University of Hertfordshire in July 2001.
- The one day conference: Time to Reflect? Promoting reflection among students and staff at the University of Gloucestershire on 5th February 2002.
Various items of publicity were produced linked to the conference, and there is a review of the event in this issue of *Planet*;
- The article: Reflecting on reflective learning: the case of Geography, Earth and Environmental Sciences submitted to the *Journal of Geography in Higher Education*;
- An on-line guide to Reflective Learning – this guide is currently being set-up.
- Journal paper: Harrison, M.E., Short, C. and Roberts, C. (2003) Reflecting on Reflective Learning: the case of geography, earth and environmental sciences. *Journal of Geography in Higher Education*, 27, 133-152.

The 'Time to Reflect?' conference was a major project output. Initially, the project team planned to run a workshop. However, interest in the work was such that a one day conference was chosen as the most appropriate vehicle for dissemination of results and sharing of views. The conference was very successful, with an estimated 70 delegates from a range of disciplines, Subject Centres and institutions attending. The plenary discussion at the end of the day was most encouraging. Delegates requested various forms of material from useful references and links, to handy hints for staff, and some good examples of where reflection has worked. Others wanted more interdisciplinary sharing of ideas, staff mentoring and general guides and examples of what to do to get started.

Evaluation of the process of running the project

More reading could have occurred in the preliminary stages; it took some time to get up-to-speed with the literature on reflection. Trying to understand the generic issue of the role of reflection in higher education learning, and how reflection can be specific to a discipline, proved stimulating. Also, making absolutely clear that the project team was studying reflection as part of the process of learning within the GEES disciplines rather than explore personal self-reflection. The advice of Jennifer Moon was most helpful in terms of generic principles of reflection. What was more problematic was 'realising' how reflection could be successfully promoted in the case study module chosen to pilot reflective learning exercises.

The questionnaire had some flaws. Certain questions could have been improved (see on-line guide). A different database could have been used. The GEES mailing list is not comprehensive and some Departments/Schools have more than one representative on the mailing list.

Possibly the greatest challenge to the success of the project has been the running of the Level II Research Methods module at University of Gloucestershire. The module teaching team will continue to develop and review ways of guiding student reflection.

Conclusion

The project team has learnt that reflection usually thrives in a supportive open environment where staff and students can share with one another their thoughts and ideas. Reflection does contribute to improved student learning but reflection takes time and sadly in many instances educators must find ways of giving themselves and students time to reflect.

References:

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Cowan J 1998: *On Becoming an Innovative University Teacher*. Buckingham: Open University Press.

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