

A12. Actively linking teaching, research and sustainability: The development of a 'real' research project on sustainability within a research methods module

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This research methods unit for students of geography, various environmentally-related disciplines and landscape architecture students examines the use of qualitative approaches in social science research, through the medium of active learning. A number of research methods are explored and critically evaluated by students in terms of their practical use, appropriateness, and, the type of data they yield. The use of the active approach links in well with some of the key texts in this area (May 1997; Silverman 2000; Denzin and Lincoln 2003), but is also used to explore with students issues about sustainability in organisations and facilities, as well as more generally.

The student research project described here is based around a critical evaluation of a sustainability issue within a large organisation, using qualitative approaches. Qualitative methods are particularly suitable for investigating social science research problems, as they allow an evaluation of principles and policy, as compared to practice. From the academic year 2006/07 onwards, for example, the students on this unit will contribute to the long-term evaluation of the use, function, purpose and effectiveness of the Centre for Active Learning (CeAL) building at Francis Close Hall campus of the University of Gloucestershire. The building was built with a £2 million grant for the Higher Education Funding Council for England (HEFCE) as part of the University's successful award of a Centre for Excellence in Teaching and Learning (CeAL 2006: Appendix 1), and was designed to operate in an environmentally-sustainable manner. Sustainability has many dimensions, however, and aspects such as social and economic sustainability, as well as technical issues, can be highlighted.

Aims

The aim of the activity is for students to experience generating data using qualitative research methods, in the context of a 'real' project. Since this is often the first time that many of the students will have used some of these approaches it is important that they do so within a module aimed at introducing, developing and testing research methods. The 'live' nature of the project also introduces a secondary aim of the activity, namely empowering students to influence issues related to the student experience within a university espousing sustainable practice as an explicit part of its Vision Statement.

Rationale

The resulting rationale is that the gathering and analysing of 'real' qualitative data that will inform and improve the student experience should be an attractive, engaging and relevant activity. The activity will also be contributing to the evaluation on the effectiveness of the building through the introduction of data on the social learning aspects and other aspects of sustainable practice of the CeAL building.

Implementation

The sessions start by exploring the difference between quantitative and qualitative methods and the importance of research design within the qualitative tradition. In terms of methods, the lecturers have found it most straightforward to begin with semi-structured interviewing as some students are familiar with this method. Subsequent sessions cover group interviews, participant observation and text and visual analysis while at the same time discussing the assessment with groups of students. The assessment is normally completed in groups of four students by combining four different methods in a report that has a shared beginning and end (see Appendix 2). Each student takes responsibility for one particular method:

- One-to-one interviews (normally two key interviews);
- Group interviews (normally one group interview of three or more people);
- Ethnography/participant observation (normally 5 hours of observation);
- Analysis of texts and/or visual imagery.

In terms of the link between policy and principles on the one hand and practice, on the other, the association is as follows:

- Policy and principles: one-to-one interviews (with key staff); analysis of texts and visual imagery (strategy documents relating to the University, and CeAL itself, signage etc)
- Practice: group interviews (with users such as students); ethnography or participant observation (of users).

In the past students have been able to develop their own projects in discussion with the unit leader. However, by developing the link to the CeAL building, the data from all the projects can be pooled and analysed by both staff and students. A feedback session is planned where the students receive some feedback and discussion based on their combined findings before preparing to present them to the CeAL team responsible for the evaluation of the building's use. This provides a direct route for the students to see how the data they generated is used directly to improve the student experience. Over time, a dialogue will be developed between the CeAL team and the students and the data generation might be fine-tuned to particular issues. Best practice in relation to similar approaches of problem based or enquiry based learning concerning the teaching of research methods will also be explored.

Sustainability focus

The module has strong links to social sustainability but this also links across to economic and environmental aspects as well. The assessment ensures that students engage with aspects of social sustainability and are exposed to such issues within the University, particularly as they concern the student experience. With the addition of the CeAL building they are able to see a new and innovative way of developing a modern learning space that interlinks social, learning and sustainability aspects. Given that this was a planned development, the documentation and discussions can be made available to students enabling them to have a deeper understanding of the building and the intentions that underpinned its construction.

Active learning

The activity has a clear active learning premise, as the content of the assessment is the development of a real project that will feed into the long-term evaluation of the CeAL building. In this sense the assessment is innovative and over the period of the CETL programme the data will be

collected and fed into the overall evaluation, increasing student involvement and developing each student's understanding of what active learning and the CeAL building is trying to achieve. Qualitative methods require the thinking to be strongly linked with the doing and reflecting, and this is highly developed within the module, in both a real life and a sustainability context.

Feedback

Positive comments from students included:

- *Links practical with theory, gathering real data helps*
- *Presentation useful in achieving early learning of methods*
- *Really enjoyed gaining hands on experience*
- *Good, have knowledge in qualitative research, how they can be used and analysed.*
- *Favoured focus groups, something I am most likely to use in the future*
- *Excellent 'active learning' and practical way of explaining theory.*

A minority of students expressed negative views about the challenge of linking research methods teaching to sustainability in an integrated way. In particular they noted that everything had to be completed so quickly, especially when they would have like to spend more time on one particular method.

The feedback clearly showed the level of involvement by the students. It is fair to say that many students were rather limited in their understanding of sustainability and were apprehensive about applying the qualitative methods to an area of sustainability with which they were less comfortable. However, by the end of the exercise and with the reassurance gained from discussing the sustainability issues concerned with the task they had set themselves there was a high degree of appreciation of linking the practical and the theory with 'real data'.

Strengths and weaknesses

The major strength is that the collection of real data will serve a useful purpose and this is an excellent way to learn about research methods. Since this is the first exposure of these methods for some students it is also important that it is a relatively safe environment where 'failure' can be a positive learning experience through reflection and the feedback and

collective analysis. This should reinforce the value of the approach and build up confidence so that the methods can be included in the final year, perhaps within the dissertation. The use of research-active staff also helps, as they are able to provide examples from their own research of using these methods and writing reports based on the data generated. Similarly, the evaluation of the CeAL building is also a safe learning experience for the University, as CETL projects nationally were encouraged to be experimental and innovative, thus reducing the possibility of reputational damage from any negative findings.

Programmes

Investigative Methods is a Level 2 unit on qualitative methods worth 50% of 15 CATS points. The unit is taken by campus based and distance learning students on a range of undergraduate programmes, including Geography, Community Development and Heritage Management.

Key words:

Research methods; qualitative research; live project; active learning; student experience

References

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Appendix 1

Centre for Active Learning building

Active learning at the University of Gloucestershire

The approach to active learning at the University of Gloucestershire has been developed from the Kolb Learning Cycle (Kolb 1984) and the Performances of Understanding (Blythe and Associates 1998).

The Kolb cycle may be described as four stages: experience, reflect, generalise and test which each link with individual learning styles. At the Centre for Active Learning the introduction of the 'performances of understanding' into the model acknowledges that activities at each stage of the cycle requiring students to use knowledge in new ways or situations allows students to build and demonstrate their understanding, thus developing 'capable and enthusiastic active learners'.

Support for active learning

The building is designed to provide a focus and an active resource for support and encouragement for innovation and research into active learning.

Learning is the process whereby knowledge is created through the transformation of experience

(Kolb 1984: 38)

The building will provide a variety of spaces designed to support the development of 'capable and enthusiastic active learners' and will endeavour to provide or encourage the following:

- Collaborative, innovative and social learning
- Flexible environment for students and staff
- Student-owned space
- Modern and technologically rich environment
- Self-supporting in layout and management, encouraging students to use the space independently and responsibly, encouraged by clear signposting and information both within the building and on the website
- Supporting diversity of student groups in terms of access and learning styles

The building is designed as three separate and distinctive zones, one on each floor to achieve the greatest flexibility.

References

Blythe, T. and Associates (1998) *The teaching for understanding guide*, San Francisco: Jossey- Bass.

Kolb, D.A. (1984) *Experiential learning: experience as the source of learning and development*, Englewood Cliffs, NJ: Prentice-Hall.

Appendix 2 Qualitative Methods Assignment Structure

Project Structure (assuming a group of four preparing a single report)

Section A - Introduction

Write a concise and brief introduction to

- The topic and its context
- The aims and objectives of the research (the research question/hypothesis to be tested)
- Research methods to be used, explaining clearly how these will achieve specific aims and objectives

[800 words. This part of the assignment carries 20% of the marks. It is a group mark.]

Section B - Research reports

This section includes four reports (one from each student). Each report should contain a detailed and reflective account of the use of the research method chosen (by that individual student) to investigate the topic. Each individual report (and an appropriate appendix containing the hard data) should address:

- The way the research methods were used
- The data yielded from the research
- Analysis of the data

- Detail on the practicalities and appropriateness of using this research method to approach the problem (including discussion on research ethics and any sensitive issues)
- A reflective account of the research process

[1200 words for each individual contribution: 50% of the marks. It is an individual mark.]

Section C - Discussion and conclusions

This section should contain:

- Critical discussion comparing the use of the different approaches including their advantages and disadvantages
- Conclusions relating to:
 - The research question and objectives set in your introduction;
 - The areas of disagreement and agreement between the four sets of data;
 - An evaluation of the research process;
 - The appropriateness of the different techniques for investigating the given topic;
 - Your experiences of employing qualitative research methods.

[1000 words: This part of the assignment carries 30% marks. It is a group mark.]