

## A Strategy to Promote Active Learning of an Advanced Research Method

Hilary J. McDermott<sup>1\*</sup> Terence M. Dovey<sup>2</sup>

<sup>1</sup>Work and Health Research Centre, School of Sport, Exercise and Health Sciences,

Loughborough University, Loughborough, Leicestershire, LE11 3TU. England

[H.J.McDermott@lboro.ac.uk](mailto:H.J.McDermott@lboro.ac.uk)

<sup>2</sup>Loughborough University Centre Research Eating Disorders, School of Sport, Exercise  
and Health Sciences, Loughborough University, Loughborough, Leicestershire, LE11

3TU. England

[T.M.Dovey@lboro.ac.uk](mailto:T.M.Dovey@lboro.ac.uk)

\* Corresponding author. Tel +44 (0)1509 223098; Fax +44 (0)1509 223940.

E-mail address: [H.J.McDermott@lboro.ac.uk](mailto:H.J.McDermott@lboro.ac.uk)

Research methods courses aim to equip students with the knowledge and skills required for research yet seldom include practical aspects of assessment. This reflective practitioner report describes and evaluates an innovative approach to teaching and assessing advanced qualitative research methods to final year psychology undergraduate students. An active learning approach involving auto-photography was developed and administered as the assessment requirements for a qualitative component of an advanced research methods module. The authors suggest that this student-centred active learning exercise is a useful and successful strategy to promote the construction of knowledge.

Introductory undergraduate research methods courses cover basic research principles, methods and practices and aim to equip students with the knowledge and skills necessary to carry out independent research. Advanced modules may also aim to provide students with the necessary skills for a career in research. Topics taught on such modules can be diverse in nature, incorporating both quantitative and qualitative techniques, yet can be challenging to teach due to the technical complexity of some course material. In addition, student interest in the topic can unfortunately be quite low (Bull & Pelco, 2006).

Pietersen (2002) stresses the importance of an experiential approach to teaching research methods in higher education and argues that the maxim '*Give me a fish and I will eat today, teach me how to fish and I will eat for a lifetime*' can be applied to teaching such a topic. This implies that the transmission of knowledge alone in relation to research methods does not necessarily mean that the student will develop research skills (Pietersen, 2002).

Active learning has been defined as any instructional method which engages students in the learning process (Prince, 2004). A number of studies have identified that student-centred active learning tasks may be superior to explicit instruction alone in promoting higher level thinking (Richmond & Hagan, 2011) and such experiential activities have proved particularly useful in psychology teaching (Poirier & Feldman, 2007; Yoder & Hochevar, 2005). Despite this, temporal constraints and other inherent difficulties often preclude an active learning approach to research methods teaching and assessment on psychology courses. Many tutors do not use active learning because they have too much content to cover and the approach takes too much preparation time (Lea, Stephenson &

Troy, 2003). A quick review of module specifications available on line for undergraduate research methods modules in the UK reveals that a variety of assessment tasks are utilised such as literature reviews, essay, written examinations and student-led research projects. Wakeford (2003) suggests that effective assessment should reflect truthfully some combination of an individual's abilities, achievement, skills and potential; the assessment should reflect course or programme content, be valid and reliable. In general terms, the nature of assessment should reflect the general objectives of the course in relation to intended learning outcomes. These guiding principles were the basis for the development of our own assessment requirement which we reflect upon here. Our reflections are shared as an example of innovative practice in experiential learning whereby current pedagogical thinking was embedded within an active learning assessment activity. Sharing 'learning activities' such as this is an important aspect of scholarship and particularly relevant to teaching research methods.

The authors jointly teach a newly developed optional advanced research methods module to final year undergraduate psychology students (Advanced Experimental and Qualitative Design and Analysis). The module consists of eleven two-hour teaching sessions spread over a semester (fifteen weeks), five of which are dedicated to qualitative research approaches and six to experimental approaches. The qualitative component is assessed by coursework (50% of total module marks) and the experimental component is assessed at the end of the module by examination.

The assessment requirement for the qualitative component of this module was developed over the summer of 2010 and consists of an active learning exercise based on visual research methods. We drew on the pedagogical literature during the development of this assessment and were influenced by Gibbs (1992), who describes a number of teaching strategies which promote effective student learning. Our aim was to provide the students with the opportunity to develop practical research and analytic skills and Gibbs (1992) suggests that the 'learning by doing strategy' takes students beyond the reproduction of knowledge to the application of knowledge. Establishing best practice in education involves integrating research findings with professional judgement and experience (Davies, 1999) and we therefore offer our professional reflections and evaluation of this approach in this paper.

Our advanced course included instruction on image-based research, a contemporary approach to visual material as a form and source of data and we decided to base the assessment on this novel research approach. Auto-photography, sometimes referred to

as self-directed photography or photo voice, is an ethnographic research technique which involves research participants documenting images of their choice and has become increasingly popular in the social sciences (Phoenix, 2010). Our practical assessment involved an auto-photography task. Increasingly, visual research methods are being adopted within the Social Sciences (Spencer, 2011) and this growing interest inspired our decision to include such an approach within our teaching. A practical task based on visual methods presented a unique learning opportunity for the students and by including an auto-photography component we hoped to enhance engagement among the students. A task based on visual research methods offered the opportunity for assessment via a visual display and we asked the students to produce a poster detailing their findings. This assessment linked with the learning outcomes for the module and offered an alternative to a written piece of work.

During the academic year 2010/2011, fourteen students registered for this module. Following ethical approval, each student was instructed to take four photographs based on the statement '*What University means to me*'. According to Bostock (1998), instruction should be anchored in real-world problems, events or issues which may be meaningful to students and we felt this topic would have additional meaning for our students. The photographs were submitted to the tutor with a short textual explanation of each (photographs of individuals were prohibited). The complete set of photographs and explanations was then uploaded and made available to the whole class via LEARN (the University's Virtual Learning Environment) for analysis. The students were instructed to review the complete set of photographs and to conduct an interpretivist analysis of the dataset. Following this analysis the students were required to individually produce a poster (size A0) presenting their analysis and conclusions.

In evaluating our approach we used formal and informal student feedback (both quantitative and qualitative). We also reflected on our own professional practice, an important component in developing best practice (Davies, 1999). As a result of this we believe this assessment task allowed the students to gain practical knowledge and skills in relation to a contemporary research approach. From informal feedback gained from the students and individual one-to-one discussions with the students we are confident that it assisted in their understanding of complex advanced philosophical issues. More formal feedback in the form of a module evaluation sheet confirmed this. The students reported enjoying the module, it developed their engagement with the topic and the teaching methods used assisted in developing their understanding.

The assessment strategy used in this module was embedded in pedagogical thinking. Auto-photography is a research tool which lends itself particularly well to modular-based research methods teaching; it can be completed in a matter of weeks and the data are generated by the students themselves. In our opinion, this approach perfectly matched Wakeford's criteria for an effective assessment: it was valid and reliable as an assessment requirement and reflected the general objectives of the course in relation to intended learning outcomes (Wakeford, 2003). In addition, the small number of students opting to take this module meant that marking the completed assignments was not an onerous and time consuming task. Furthermore, in a larger cohort, the task would lend itself well to a group presentation.

The fourteen posters developed as a result of this module were displayed in the School for a period of two weeks. The posters drew much attention from staff and students alike and were of particular interest to those involved in student welfare and those providing student services. The participating students themselves provided favourable feedback concerning the module and the associated assessment component; quantitative feedback in relation to the module was encouraging with students providing an average rating for module as 4.41 (out of a possible 5.0). The qualitative feedback was also all positive and the following example reflects the comments written on the module feedback form in relation to the assessed coursework:

*“I found this module very intellectually stimulating & enjoyed listening to / participating in the many debates. I enjoyed looking at various aspects of qualitative and quantitative methods in more detail. My favourite aspect of this module was producing the poster for our coursework assignment as this was completely different to anything we have been asked to do and allowed us to express our creativity in a different way”*

This paper offers our professional reflections on the development and implementation of an active learning task as assessment material for a qualitative component of an advanced undergraduate research methods module. We recognise that no form of assessment is without its limitations, but we provide an evaluation of an approach which was strongly informed through the educational literature. Our 'reflective' approach to this exercise may also lack internal validity; however sharing innovative and discipline-specific knowledge has been recognised as an important form

of pedagogical vigour (Dunn, 2008). Research methods modules aim to equip students with practical research skills, and as such they can be effectively assessed through a practical piece of work. In setting the students a 'practical assessment task' we believe the assessment component reflected the module content (Wakeford, 2003) and facilitated the active learning of important research skills among final year psychology students.

## References

- Bull, C.T. & Pelco, L.E. (2006). Teaching research methods to undergraduate psychology students using an active cooperative learning approach. *International Journal of Teaching and Learning in Higher Education*, 2, 147 – 154.
- Bostock, S.J. (1998). Constructivism in mass higher education: a case study. *British Journal of Educational Technology*, 29, 225 – 240.
- Davies, P. (1999). What is Evidence-based Education? *British Journal of Educational Studies*, 47, 108 – 121.
- Dunn, D.S. (2008). Another view: In defense of vigor over rigor in classroom demonstrations. *Teaching of Psychology*, 34, 349 – 352. DOI 10.1080/00986280802374039.
- Gibbs, G. (1992). *Improving the Quality of Student Learning*. Bristol: Technical and Educational Services.

Lea, S.J., Stephenson, D. & Troy, J. (2003). Higher education students' attitudes to student-centred learning: beyond 'educational bulimia'? *Studies in Higher Education*, 28, 321 – 334.

Phoenix, C. (2010). Auto-photography in aging studies: Exploring issues of identity construction in mature bodybuilders. *Journal of Ageing Studies*, 24, 167 – 180.

Pietersen, C. (2002). Research as a Learning Experience: A Phenomenological Explication. *The Qualitative Report*, 7, Number 2.

Poirier, C.A. & Feldman, R.S. (2007). Promoting active learning using individual response technology in large introductory psychology classes. *Teaching of Psychology*, 34, 194 – 196.

Prince, M. (2004). Does Active Learning Work? A Review of the Research. *Journal of Engineering Education*, 93, 223 – 231.

Richmond, A.S. & Hagan, L.K. (2011). Promoting higher level thinking in Psychology: Is active learning the answer? *Teaching of Psychology*, 38, 102 – 105.

Spencer, S. (2011). *Visual Research Methods in the Social Sciences*, Abingdon, UK: Routledge.

Wakeford, R. (2003). *Principles of student assessment*. In: Fry H, Ketteridge S and Marshall S, (Eds). *A Handbook for teaching and learning in higher education. Enhancing academic practice (Second Edition)*, RoutledgeFalmer: London.

Yoder, J. & Hochevar, C. (2005). Encouraging active learning can improve students' performance on examinations. *Teaching of Psychology*, 32, 91 – 95.

**DR HILARY MCDERMOTT\*** gained her PhD in 2007 and is a Lecturer in Psychology within the School of Sport, Exercise and Health Sciences at Loughborough University. Her research expertise concerns health and well-being with a strong emphasis on injury prevention, particularly within the context of work. Upon her appointment as a Lecturer, Dr. McDermott was awarded a 12 month mentorship through the World Health Organisation. This programme supports early career researchers committed to injury prevention. Dr. McDermott has considerable previous experience as a trainer and has drawn on this to inform her teaching at Loughborough. She has expertise in qualitative research design and analysis and has drawn on this to inform her teaching of this topic. In 2010, Hilary was nominated as 'Lecturer of the Year' within the University. Dr. McDermott is responsible for teaching qualitative research methods on the BPS accredited Psychology Degree at Loughborough University. She also contributes to the programme with teaching relevant to her research interests. *Correspondence:* Work and Health Research Centre, School of Sport, Exercise and Health Sciences, Loughborough University, Loughborough, Leicestershire, LE11 3TU. England. ([H.J.McDermott@lboro.ac.uk](mailto:H.J.McDermott@lboro.ac.uk))

**TERRY DOVEY** is a psychologist working in the Loughborough University Centre for Research into Eating Disorders. By training, Terry is a Psychoneuroendocrinologist in appetite regulation. However, since the completion of his PhD, his primary research interest has been in feeding disorders in young children. Terry also has an active interest in television advertising to children and in the psychopharmacology of weight loss. Terry is responsible for undergraduate quantitative research methods for psychology, biology and ergonomics within the university. *Correspondence:* Loughborough University Centre Research Eating Disorders, School of Sport, Exercise and Health Sciences, Loughborough University, Loughborough, Leicestershire, LE11 3TU. England. ([T.M.Dovey@lboro.ac.uk](mailto:T.M.Dovey@lboro.ac.uk))

\* Corresponding author. Tel +44 (0)1509 223098; Fax +44 (0)1509 223940.

E-mail address: [H.J.McDermott@lboro.ac.uk](mailto:H.J.McDermott@lboro.ac.uk)



*Manuscript received 13 July 2011*

*Revision accepted for publication 19 November 2012*