



Teaching Research Method Using a Student-Centred Approach? Critical Reflections on Practice

Jo Barraket

University of Melbourne

barraket@unimelb.edu.au

Abstract

This article presents a reflective case study analysis of an attempt to enhance student learning through the introduction of student-centred teaching methods in a masters-level social research methods subject. The introduction of a range of specific techniques, including case study teaching, problem based learning, groupwork, role-play and simulation, is reflected upon. The article concludes that the re-orientation of the curriculum toward student-centredness in this case had a positive effect on student performance, learning experience and subject evaluation. In particular, the use of student-centred techniques facilitated a strong social context for learning, and provided students with a common experiential framework from which to explore the technical aspects of the curriculum. However, the analysis also found that students continued to place value on more formal teaching methods, and that the value of student-centred techniques in this case rested in the way in which they were integrated with more didactic teaching practice.

Keywords: *research methods; student-centred learning; small group teaching.*

Introduction

This article seeks to explore the practice of effective small group teaching of social research methods, using what might be broadly framed as a student-centred approach. The specific focus of analysis is the introduction of a range of interactive learning activities into the curriculum of a masters-level research methods subject in the area of policy studies. These changes to practice were made in response to the dual challenges of teaching effectively with experientially diverse student groups, and making the research methods curriculum interesting and relevant to these groups. The approach adopted was informed by an interest in the related concepts of effective teaching in small groups, and student-centred approaches to learning and teaching.

Student-centred Approaches Using Interactive Learning Activities in Small Group Teaching: The Enactment of Constructivist Learning Theory?

Pedagogically, student, or learner, centred approaches to teaching have emerged from changing understandings of the nature of learning and, in particular, from the body of learning theory known as constructivism. In the broadest terms, constructivist learning is based on an understanding that learners construct knowledge for themselves (Hein, 1991; Krause et al, 2003). As Maypole and Davies (2001) have observed, constructivist theories encompass a disparate array of philosophical, psychological and epistemological orientations. One of the key distinctions within this broad theoretical 'camp' is that between cognitive and social constructivism. Cognitive constructivism is based on Piaget's model, which emphasises the interaction between the individual and their environment in constructing meaningful knowledge, whereas social constructivism – attributed to the work of Vygotsky – emphasises the importance of student learning through interaction with the teacher and other students (Jadallah, 2000; Maypole & Davies, 2001). Insofar as the changes to teaching practice discussed in this article subscribe to constructivist approaches to learning and teaching, they adhere to the social constructivist orientation. Hence, the emphasis in the teaching practices reflected on here is on building the social context for learning, and on facilitating student learning through small group activity and encouragement of high levels of peer to peer, and learner to teacher interaction.

While constructivism encompasses a broad array of understandings of learning theory and practice, the common thread running through this body of theory is the value placed on student-centred learning (Maypole & Davies, 2001). The principal implication of constructivist understandings for the way in which knowledge is produced is that students are the key initiators and architects of their own learning and knowledge-making, rather than passive 'vessels' who receive the transmission of knowledge from 'expert' teachers. Student-centred learning (and teaching) has itself been variously defined as a process by which students are given greater autonomy and control over the choice of subject matter, the pace of learning, and the learning methods used (Gibbs, 1992), a mechanism for higher education reform, by which students have individual control over higher education finance via a voucher system (West, 1998), and a broad approach to teaching that ultimately holds the student responsible for their own educational advances (Nanney, no date).

For the purposes of this discussion, I draw on the thinking of Weimer (2002), who is concerned with learner-centred teaching as an exercise in changing teaching practice. Specifically, Weimer identifies learner-centred teaching as encompassing five changes to practice:

- shifting the balance of classroom power from teacher to student;
- designing content as a means to building knowledge rather than a 'knowledge end' in itself;
- positioning the teacher as facilitator and contributor, rather than director and source of knowledge;
- shifting responsibility for learning from teacher to learner; and
- promoting learning through effective assessment.

As is suggested by Weimer's five changes, shifting towards student-centred learning encompasses changes to the learning environment (social and physical), changes to the nature and communication of learning content, and changes to the assessment of learning. In the following discussion, I am particularly concerned with learning environment and learning content. While recognising that the nature of assessment is a central concern of student-centred educational design, the changes in teaching practice considered below were introduced after the fact with regard to design and promotion of the subject to the students involved. As such, significant deviations from originally planned assessment were not possible. While this somewhat constrains the analysis of learning outcomes achieved in the shift in educational design, it also reflects the real-world dynamics of adapting curricula in University contexts.

The Case Study Context

The contextual focus of this article is changes to teaching practice in a Public Policy Research Methods subject at the University of Melbourne. Policy Research Methods (PRM) is a Masters level elective subject in the Department of Political Science's Public Policy and Management Program. The subject is also available to students from the 4th year undergraduate program (including honours and pass degree students), the Master of Social Policy (a distinct, but related, program) and the Master of Development Studies (a program run by another department with different entry prerequisites to the Master of Public Policy and Management). The student cohort includes full time employed professionals with significant middle management experience in their public policy fields (which range from economics to science to community services) and students with no professional experience of public policy. The group includes those in the final stages of a four-year degree and those who are taking up study for the first time in up to 10 years. It includes domestic students with experience in the Melbourne University environment and international students who are entering the Australian higher education system for the first time. In brief, the student cohort is diverse!

The PRM class focused on in this discussion comprised 23 students, including thirteen masters students, two honours students, and eight pass degree undergraduates. Students in the class were citizens of Australia, Singapore, Sri Lanka, India, the United States, and Malaysia.

Methodology

The methodology employed in this analysis is a reflective case study approach loosely based on an action research methodology. In brief, the action research methodology may be described as an iterative process of change or intervention, data collection and analysis, and reflection leading to action outcomes. Attributed to the work of Kurt Lewin and later, Paolo Friere, action research in the context of education has been defined as a form of systematic inquiry that produces direct impacts on an educator's practice and empowers them to reinvigorate their classroom environments and promote improvements to instruction methods. (Glanz, 1991)

In this case, significant changes to classroom teaching methods, which are discussed in further detail below, were introduced to the research methods subject. Qualitative and quantitative data were collected via formative and summative subject evaluations, student performance in assessment, and classroom observation. These data were comparatively analysed with similar data collected in the same subject in the previous year, with an emphasis on qualitative findings and descriptive statistics. The reflections discussed in this article form the basis for further curriculum changes in the future.

The Challenge

The primary learning objectives in the Policy Research Methods curriculum are to develop students' critical and reflective thinking about and practical skills in designing, implementing or managing empirical research relating to public policy (including applied research in the public and non-profit sectors and academic research about public policy issues). There are several practical and pedagogical challenges involved in effectively designing this subject.

The practical challenges centre around the diversity of the student cohort. In brief, it is challenging to teach this subject in a manner that effectively accommodates the different educational and professional backgrounds of the class, particularly because, as a group, they have not had any common learning experiences. This is an increasingly common issue for educators teaching postgraduate coursework programmes, where degree flexibility in the form of student choice in the pace, combination and order of subjects taken is encouraged. The practical challenge in this case is, in a nutshell, to build the common experiential ground necessary to facilitate students' engagement with substantive issues of the subject.

The pedagogical challenge of this subject is a well-known one. Primarily, the challenge is one of making the research methods curriculum interesting to students (see Benson and Blackman, 2003). With regard to shifting from a teacher centred to a student-centred approach to teaching, the pedagogical challenge is one of moving away from a standard didactic approach of transferring technical information about research methods to students, to the creation of an interactive environment in which students are able to master that technical information through processes of communication, experience, reflection and collective analysis. While social research methods teaching is traditionally characterised by the former, my own experience of teaching this material in four different programmes at three different universities is that this results in a very 'instrumental' understanding of the process of conducting effective research. The main pedagogical objective in shifting toward a more student-centred approach was to enhance students' experiential understanding of the complexities and creativity of conducting effective research in political environments.

The Change to Practice

In seeking to develop a more student-centred approach in this subject, I focused specifically on the role and nature of small group activities. As Hativa (2000) has identified, student-centred instructional methods include discussion, group work, role-playing, experiential learning, problem based learning and case-method teaching. All of these methods were utilised in various combinations throughout the semester.

Table One sets out the specific changes made within the subject in the year in question (2004), compared to the lesson design of the previous year (2003). In brief, the changes made included, increasing the number and diversity of small group activities within class time; changing the order of class events so that small group activity and class discussion generally preceded any formal lecturer presentation; and drawing explicitly on primary resources (such as newspaper articles, research reports and policy documents) in the design of small group activities wherever possible. For the purposes of brevity, only two specific topics covered in class (research ethics and designing effective research instruments) are discussed in detail below. However, significant changes were made to the educational design of each topic covered in class. It should be noted that more didactic teaching practice – in the form of formal presentation from the lecturer – was not done away with altogether. Rather, this aspect of teaching was de-emphasised in favour of small and large group interaction using primary source material wherever possible.

Subject Topic	2003 Class Design	2004 Class Design
Introduction	Ice-breaker, subject overview and preliminary presentation	Ice-breaker, subject overview and preliminary class discussion
Philosophy of Social Research	Lecturer presentation followed by scenario exercises	Scenario exercises followed by lecturer presentation
Ethics	General discussion and lecturer presentation	4 way case study followed by lecturer presentation
Principles of Effective Research Design	Lecturer presentation and small group discussion	Individual exercise, large group discussion, small group exercise, and lecturer presentation
Sampling methods	Lecturer presentation and general discussion	Small group scenario exercise, large group discussion, lecturer presentation
Designing Research Instruments	Group analysis of existing instruments (examples of good practice and bad practice), lecturer presentation	Group participation in formative evaluation of the subject, group reflection on the survey instrument, lecturer presentation
Data Analysis	Computer workshop and lecturer presentation	Guest lecturer, small group scenario exercise, small group critical reading exercise and class discussion
Evaluation	Lecturer presentation and general discussion	Small group scenario exercise and lecturer presentation
Politics in Research	Not covered	Role plays drawing on two scenarios drawn from current public affairs

Table 1: Changes in Class Design, 2003-2004

Reflections on Changes to Class design:

1. Ethics

The specific objectives of this topic were to ensure students' understanding of the range of legal, moral, and practical issues that inform the conduct of effective social research in a public policy context, and the complex of needs of different policy actors in relation to research ethics. Further, the learning objective was to encourage students to move beyond viewing ethics as simple a matter of compliance, towards a critical understanding that ethical practice is also constitutive of effective practice in policy research.

In 2003, this class was based on a general class discussion about research ethics in context, followed by formal lecture presentation. In 2004, however, a four-way case study method was utilised. The case-study scenario was based on an actual research project being commissioned by the state Government at the time, and four different 'stakeholder positions' (ie the government, the subjects of the research, the commercial team contracted to do the work, and the workers whose work might be affected by the findings) were allocated to the students, who were divided into four small groups.

This was followed by a class discussion, focusing on the different needs and expectations of stakeholder groups regarding ethical considerations in the research. The session was concluded with a formal presentation to augment students' understanding of epistemological approaches to research ethics, and the practical considerations involved.

Reflections: While the format employed in 2003 did not appear to have adverse affects on student understandings of research ethics, the extent to which the 2004 format enhanced student learning and subsequent knowledge was notable in the more advanced level of large class discussion that occurred immediately following the case study activity. Students in the 2004 class demonstrated an understanding and engagement with the diversity of perspectives that inform ethical choices in research, and moved significantly beyond a discussion of compliance into a broader critical engagement with the philosophical frameworks that underpin research ethics. Just as importantly, the case study provided students with a common 'experience' which proved valuable when they were introduced to the more formal aspect of the class, as we could draw on this commonality to provide examples to support some of the broader conceptual issues being discussed. In this sense, the interactive small group activity became an important 'technology' (see Cooper, 1979) in the educational design for this topic. In terms of enhancing the social context of learning (see Bruffee, 1993; Jarvis), 1995, the exercise also provided students with opportunities to further get to know each other, and the small group and class discussions were characterised by broad participation, a higher level of peer to peer engagement than in previous classes, and much laughter and hilarity!

2. Designing Effective Research Instruments

The objectives for this topic were to get students thinking about the principles of designing effective instruments, such as surveys, interview schedules and focus group questions. This included thinking about the micro-features of the instruments themselves, the quality of overall design, and the potential impacts of the external environment on that design.

In 2003, this topic was based on students critically analysing existing research instruments that had been brought to class as practical examples. In 2004, however, this exercise was extended through a process of modeling practice.

That is, the session was based on an anonymous formative evaluation questionnaire of the subject, which was administered at the beginning of class. Following students' completion of the questionnaire (and after these had been collected and put away), class discussion about the design and administration of the questionnaire was facilitated.

Students were encouraged to reflect on their own experience of completing the questionnaire and any problems of interpretation they experienced, while I reflected on the ethical and practical challenges of designing the questionnaire. This interaction continued through the more formal presentation phase of the class, which aimed to draw in information about a broader range of research instruments drawing on set readings on the topic.

Reflections: The class exercise used in 2003 was effective in encouraging students' critical analysis of existing research instruments from an external perspective. The exercise used in 2004 also encouraged critical analysis, but this time students related to the activity as actual participants in the research itself, which appeared to enhance their experiential understanding of the power of good (and not so good) research design. In addition, the process of administering the questionnaire gave me the opportunity to reinforce points from this and earlier classes by modeling how to administer a questionnaire appropriately. Finally, the results from the formative evaluation provided an opportunity to assess students' experience of the subject, and to adapt subsequent classes to meet stated needs.

Impacts of the Approach on Students' Learning Experiences

The outcomes of taking a more student-centred approach within the context of teaching PRM appear to have been consistently positive. With regard to student performance in assessment as a measure of learning outcomes, the mean result for 2004 was somewhat higher than it was in 2003. This information needs to be interpreted very cautiously, however, as the two classes are not directly comparable in terms of size or cohort.

Perhaps more convincingly is the quantitative and qualitative evidence derived from student evaluations. In 2003, students rated the quality of teaching in the subject as 4.2 on a five point scale (N = 9), while in 2004, the mean quality of teaching score was 4.8 (N = 18). Mean satisfaction with the overall quality of learning increased considerably, from 3.1 in 2003 to 4.6 in 2004. Further, in response to the statement "This subject was intellectually stimulating", the mean response in 2004 was 4.4, compared with 3.7 in 2003. Interestingly, despite the significantly increased levels of group-based activity in 2004, there were no notable differences in student responses to the statement "I felt part of the group", with each cohort responding favourably to this questionnaire item. This may in part be an effect of the fact that the class size was considerably smaller (N=10) in the earlier year.

Given the limitations of comparatively analysing statistical responses where class sizes are different and extraneous factors have not been controlled for, the qualitative evidence is of particular significance. There was considerably stronger qualitative feedback from students in 2004, with comments such as:

Practical elements were very good and helped everything sink in and use our skills

Group work helped me understand other people's perspectives and approaches

Lecture arrangements such as group work were great...considering I had no idea of policy research to begin with, I've learnt quite a fair bit

Five stars to case studies and class exercises! They're really enabling me to relate class content and readings in public policy (which is exactly the point, yey!)

With regard to the teaching methods used, the themes that emerged strongly from qualitative feedback in 2004 included:

- Repeated group work helped students to understand different perspectives and think more critically and reflectively about their own assumptions and values in relation to doing research;
- Students enjoyed getting to know each other, and felt confident to express themselves in class as a result of feeling comfortable with each other;
- The use of primary source material kept the subject matter interesting and relevant; and
- Formal presentation of content from the lecturer remained important.

Anecdotally, several students also indicated during the course of the subject that they had found that the group work processes developed had directly assisted them in the workplace and/or in their study techniques in other subjects. Two of the international students involved in the subject also indicated that they particularly valued the high level of social interaction in the subject, as it had helped them to make friends with domestic students, which they had found difficult in other classes. This illuminates the conclusions of broader studies (see, for example McInnis & James, 1995; Pascarella & Terenzini, 1998) that student learning outcomes and broader social engagement with University life are interdependent features in positive higher education experiences.

Overall, increasing the frequency, type and order of student-centred learning methods in the classroom appeared to have a positive effect on student performance, satisfaction and learning experience in this case. This supports Benson and Blackman's (2003) observations that activity-based approaches to teaching research methods better facilitate student learning than the more didactic model that is traditionally applied to this subject matter.

Critical Reflections on Student-Centred Teaching

As suggested by the teaching and learning experience discussed above, utilising teaching approaches that encourage students' active and experiential engagement with the subject matter (and with each other) has the potential to be extremely effective, in terms of student satisfaction and class performance. This is particularly notable in the context of a research methods subject, given that research methods is traditionally considered to lend itself to more didactic approaches where vast amounts of technical information are transmitted from teacher to student.

From the teaching perspective, the reorientation of teaching methods toward a student-centred approach proved particularly rewarding in this case. Nevertheless, there are some conceptual issues associated with this approach that require further critical reflection.

The student-centred teaching model interpolates students as active learners without really unpacking what constitutes an active learner. In my experience, students participate in their own learning in a diversity of ways, and these are not always clearly observable as 'active' learning in the classroom. With regard to the PRM experience in 2004, the potential problems of defining active learning as a set of specific behaviours and activities was reinforced by one student's formative evaluation comment on in-class exercises that:

I am really enjoying this subject and am learning a lot...[however] I got extremely stressed when required to verbally present our [small group] findings. This anxiety became such a problem I often considered missing class to avoid the situation.

As Brookfield (1990) has pointed out, the nature of participation in education is culturally contingent, and leads us to measure participation via the presence and frequency of particular student behaviours. While the notion of the active learner is a valuable one, then, it is important that as educators, we are reflective about our own personal, experiential and cultural preconceptions of 'activeness' when designing and facilitating learning.

A related limitation of the student-centred model illuminated in this case study is the subjugation of expert (educator) knowledge in favour of student engagement through problem-based learning. Weimer (2002) discusses this in terms of shifting classroom power from teacher to students. However, I would argue that this notion is based on very fixed, and limited, understandings of the nature of power and who holds it in any given context. The case study experience discussed here suggests that, while there is much to be said for facilitating students' active learning, sometimes one of the most empowering ways to do that is to share some learning of one's own. Geelan (1996) talks about this when reflecting on his own attempts at student-centred teaching as an issue of recognising that there is a difference between constructing a new set of expectations and responsibilities for ourselves as educators, and simply transferring teaching responsibilities onto the class. Student feedback on both the formative and summative evaluations of the subject discussed here consistently indicated that formal presentation of technical material and disciplinary insights by the lecturer was a very important part of their comprehension and learning in this subject. What appeared to make the transmission of this information more effective, however, was the use of group exercises and primary source material that allowed students to build a common experience from which to draw concrete examples and to which they could relate specific dilemmas. This common experiential ground was generally created through small group activities prior to the more formal presentation. Consequently, the formal presentation sessions were, themselves, much more interactive, with students drawing on the small group activities and discussions to ask questions and make observations throughout the formal part of each topic. While an emphasis on student-centredness provided the orienting focus for the subject, some of its greatest learning value appeared to lie in the way in which that was effectively integrated with more didactic teaching practice. In this sense, class content was both a knowledge resource and a mechanism by which students developed their own knowledge further.

Conclusions

The shift toward student-centredness through the use of interactive small group activities based on primary resources appears to have significantly enhanced students' learning in this case. The classroom experience was characterised by a high level of dialogue and interaction, the assessment results suggest overall strong engagement with the subject matter, and student feedback was very positive. One of the key strengths of this approach was that it allowed students to build common experiential ground, which provided a shared base for engaging with more technical aspects of the subject matter. This is increasingly important in higher education contexts where flexible learning pathways are producing diverse student cohorts with no, or highly limited, common learning experiences.

At the same time, student feedback on the more didactic features of the curriculum was equally positive. What was important, it seemed, was that the common experiential ground and supportive social context was developed first, in order to support students' access to, and engagement with, this more didactically delivered material. This suggests that a holistic teaching approach at the individual subject level is as important as particular teaching techniques that emphasise student-centredness.

The use of a more student-centred approach using small group activities has improved my response to the practical and pedagogical challenges of teaching social research methods at the postgraduate coursework level. My own conclusions are that, in the context of teaching research methods to diverse cohorts of students, integration between student-centred and more traditional approaches to teaching are a recipe for success. In the spirit of student-centredness, however, it is more appropriate to conclude with a student's observation:

"Research Methods interesting? Who would have thought!!!!!!"

References

- Benson, A. & Blackman, D. (2003) 'Can research methods ever be interesting?', *Active Learning in Higher Education* 4 (1): 39-55.
- Brookfield, S.D. (1990) *The Skillful Teacher: On Technique, Trust and Responsiveness in the Classroom*, San Francisco: Jossey-Bass Publishers.
- Bruffee, K. (1993) *Collaborative Learning: Higher Education, Interdependence, and the Authority of Knowledge*. Baltimore: The Johns Hopkins University Press.
- Cooper, C. L. (1979) *Learning from others in groups: experiential learning approaches*, Westport: Greenwood Press.
- Geelan, D. R. (1996) "The Empty center: Does student-centred learning imply abdication or role redefinition for educators?" in *Different Approaches: Theory and Practice in Higher Education*. Proceedings HERDSA Conference 1996. Perth, Western Australia, 8-12 July.
- Gibbs (1992) *Assessing More Students*, Oxford: Oxford Brookes University.
- Glanz, J. (1998) *Action research: an educational leader's guide to school improvement*, Norwood, Mass: Christopher-Gordon Publishers.
- Hativa, N. (2000) *Teaching for Effective Learning in Higher Education*, Dordrecht: Kluwer Academic Publishers.
- Hein, G. E. (1991) 'Constructivist Learning Theory' paper presented at *CECA (International Committee of Museum Educators) Conference*, Jerusalem Israel, 15-22 October 1991.
- Jadallah, E. (2000) 'Constructivist Learning Experiences for Social Studies Education', *The Social Studies* 91 (5): 221 – 225.
- Jarvis, P. (1995) *Adult and Continuing Education. Theory and practice* 2e, London: Routledge.
- Krause, K., Bochner, S. & Duchesne, S. (2003) *Educational Psychology for Learning and Teaching*, South Melbourne: Thomson.
- Maypole, J. & Davies, T. G. (2001) 'Students' Perceptions of Constructivist Learning in a Community College American History II Survey Course', *Community College Review* 29 (2): 54 – 79.
- McInnis, C. & Jame, R. (1995) *First year on campus; Diversity in the initial experiences of Australian undergraduates*, Canberra: Australian Government Publishing Service.
- Nanney, B. (no date) 'Student-Centred Learning' www.gsu.edu/~mstsw/courses/it7000/papers/student-.htm [accessed 25 May 2004]

Pascarella, E. & Terenzini, P. (1998) *How college affects students: Findings and insights from twenty years of research*, San Francisco: Jossey-Bass.

Sparrow, L., Sparrow, H., & Swan, P. (2000) 'Student-centred learning: Is it possible?' in A. Hermann and M. M. Kulski (Eds), *Flexible Futures in Tertiary Teaching* Proceedings of the 9th Annual Teaching Learning Forum, 2-4 February 2000. Perth: Curtin University of Technology.

Weimer, M. (2002) *Learner-Centred Teaching: Five Key Changes to Practice*, San Francisco: Jossey-Bass.

West, R. (1998) *Learning for Life: Review of Higher Education Financing and Policy*, Canberra: Australian Government Publishing Service.