

The role of assessment in teaching research methods: A literature review

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Overview

The background to and need for the project

In the UK, research methods courses are a staple diet of postgraduate social sciences programmes. However, undergraduate social science research methods courses have been taught in other countries for many years, most notably in the USA (see for example Ransford and Butler (1982)). Since the publication by Jenkins and Healey (2005) into the teaching–research nexus and the Quality Assurance Agency for Higher Education (QAA) guidelines into developing research skills, many UK social sciences undergraduate degree programmes have incorporated a research methods and research project course.

Even with the large number of courses teaching research methods, there is limited published research into research methods pedagogy and assessment (see Wagner et al., 2011). To help research methods tutors use assessments effectively, it is important to be familiar with the form and pattern of assessment in the Social Sciences at both the postgraduate and undergraduate level. It is possible that these might be the traditional assessments of examinations and the preparation of research proposals; however it is difficult to ascertain which methods tutors are using. For example, assessments linked to specific learning theories might be in use, such as the experiential learning activity in research methods presented by Hosein and Rao (2012) at the HEA Social Sciences Conference¹. However, innovative assessment techniques in research methods such as these may not be known to many research method lecturers because of a lack of shared literature or community of practice. Without understanding the current assessment practices in research methods, there is little scope for improving and extending these assessments to encourage and enhance students' engagement, including supporting the development of their identities as researchers.

Aims and objectives

The aim of the research was to conduct a literature search and review academic sources such as course outlines, conference and course blogs, and conference presentations/publications that included information on the assessment of research methods at both undergraduate and postgraduate levels. The project sought to gather information on academic practice from around the world. Further, the project aimed to use a framework to initially judge the assessments, then to use this information to determine the effectiveness of the assessments used in research methods learning and teaching and provide parameters for developing new ones.

¹ The details of this can be found on the HEA blog: <http://blogs.heacademy.ac.uk/social-sciences/2012/06/27/research-in-action-bringing-research-methods-to-life-by-anesa-hosein-and-namrata-rao/>

Activity

The literature review took place between January and June 2013. The research mainly reviewed course outlines in five countries (England, USA, Canada, Hong Kong, Australia) although work was carried out for New Zealand, Singapore, Wales, Scotland, Ghana and Pakistan in addition. The review of the course outlines was based on the availability of course outlines and the ease of finding such information on the internet. Therefore, the survey of course outlines was not intended to be exhaustive but rather to provide an idea of patterns of assessments.

The following framework was expected to be used to judge the effectiveness of the assessments. In particular whether the assessments:

- were *for learning or of learning*
 - feedback or reflective component included
 - formative or summative assessments
- promoted students' identity as a researcher
- promoted student engagement
- helped students receive practical experience in methods
- helped students receive practical experience in analysing qualitative and/or quantitative data
- developed students' employability skills.

However, one of the issues noted when collecting data for the course outlines was the lack of information about courses available from university websites. Further information on the actual assessments was often unavailable. In almost all instances, only information on the general form of the summative assessment was provided. For example, information on the type of assessment, such as an examination or proposal, was provided without an indication of the assessment guidelines to allow further understanding of how the assessment was intended to be measured and the possible learning outcomes being judged by the assessment. Moreover, the course outlines that were found provided little information on formative feedback/assessments. Therefore, the approach that was taken was to note the type of assessment and the level.

Considering that course outlines are used by students to judge the appropriateness of a course for themselves, it is important that at least within the UK, there should be more consistent presentation of this information to the students. In particular, as students tend to focus on assessments, these course outlines should include both the summative and formative components of their assessments along with the learning outcomes they intend to measure. Whilst these may be provided to students in handbooks, a one-page summary of the course will ensure the students have an appropriate reference during the time of study.

One of the limitations of the study was that the search term used was "research methods" and hence found course outlines that were mainly focused on research methods as being separate entities within the curriculum. Therefore, curriculums which had an integrated approach to research methods were not located..

The grey and white literature available on the internet and relevant to the research methods assessment and pedagogy was searched for and stored in an offline repository.

Outcome

Analysis of course outlines

In the eight countries, module outlines from 38 universities were examined. These were analysed using the framework and the analysis of the course outlines are held in an offline repository. From the approximately 544 course outlines analysed, around 199 course outlines had some information on which the assessments could be classified or judged.

Table 1: Number of course outlines and the number of universities examined across the five countries

Country	Number of Universities	Module Outlines Found	Outlines with Assessments
Main Countries			
England	11	179	54 (30%)
Canada	7	103	22 (21%)
USA	7	130	24 (18%)
Australia	3	27	27 (100%)
Hong Kong	6	73	53 (73%)
Other Countries			
Ghana	1	10	0
Wales	1	8	5
Scotland	1	6	6
Pakistan	1	8	8
New Zealand	11	0	0
Singapore	10	0	0
Total	59	544	199 (37%)

Using these course outlines as basis for analysis, research methods modules appeared to be assessed in similar ways, in particular, the following were the major assessment methods:

- projects (48)
- examinations (47)
- proposals (43)
- assignments (45)
- dissertations (33)
- quiz (20)
- presentations (25)
- participation (24)
- report (22)
- review (18)
- paper (16)
- essay (13)

- test (13)
- groupwork (12)
- thesis (12)

The popularity of assessments in the different countries are presented as wordles Appendix 2.

In some countries, such as Hong Kong and Canada, participation in the research methods assessments and course are usually awarded a grade particularly from as early the students' first year of undergraduate study. It is uncertain whether this is a characteristic of assessments in general in these countries or whether participation is only a focus of research methods assessments. Participation perhaps should be an important part of research methods assessments as research in general occurs between and amongst groups and rarely in isolation within the Social Sciences. Participation and having research methods taught early in degree may allow students to see research as a process between people rather than as research products being developed in isolation.

Further, the emphasis on written assessments such as projects, proposals and dissertations in most of the countries may appear appropriate for research methods. However, by merely looking at the course outlines we are unable to confirm whether these assessments appear and mean the same thing between countries as well as across universities and it may be a further area of research.

Literature review

Sixty-seven pieces of grey and white literature on assessment and pedagogy with some emphasis on or application to research methods were found and placed in an offline repository. For more details you can contact the authors of the report via email: Anesa Hosein a.hosein@surrey.ac.uk or Namrata Rao raon@hope.ac.uk

The grey literature included conference posters, blogs, web pages and conference presentations. A list of relevant grey literature can be found in Appendix I. The grey literature suggests there are important activities taking place assessing research methods but these are often lost as they are located in different places. This means that useful pedagogical information on research methods are perhaps often repeated rather than being built on. Therefore repositories of the type in Appendix I are useful for ensuring more communication and sharing of information between these silos of information,

Framework

While a framework was used to analyse the course outlines, an initial framework/suggestion was developed to help with the creation of new research methods assessments.

The developed framework suggests that research assessments should use a combination of Kolb's experiential learning cycle and Hodge's mapping of learning assessment outcomes to help promote research methods understanding from Years 1 to 3 (see Figures 1 and 2) to enable students to view research as a process rather

than a series of research products. It suggests in particular that at each level of the learning assessment outcomes (foundation, intermediate and capstone), students should be encouraged to do active experimentation and reflect on their research experiences.

For example, in Year 1 (Foundation Learning), students' assessments will be reliant on allowing them to see research as a process from an external point of view, and an assessment for this type might be students examining linked research articles to see how the authors build and refine methods and knowledge. The assessment could be then, students examining three articles that build on each other findings and explaining and reflecting on the reasons for how and why the methods were refined for each subsequent paper to meet the aims and objectives.

In Year 2 (Intermediate Learning), students should be allowed to gain experience in the uncertainty of the research process and how they fit into research. Therefore, these assessments should allow students to experience a part of research that allows for uncertainty. For example, students could be asked to pilot a research instrument and based on their pilot they could be asked to reflect on their experience and how to improve the instrument (this is illustrated in Figure 2).

At Year 3 (Capstone learning), students should have assessments that allow them to develop and become aware of themselves as researchers and hence an assessment may be the conducting of a small-scale research project but also requiring them to reflect on the research process and their research capacity. Although these assessments can sit separately in courses, they can also be embedded within the curriculum.

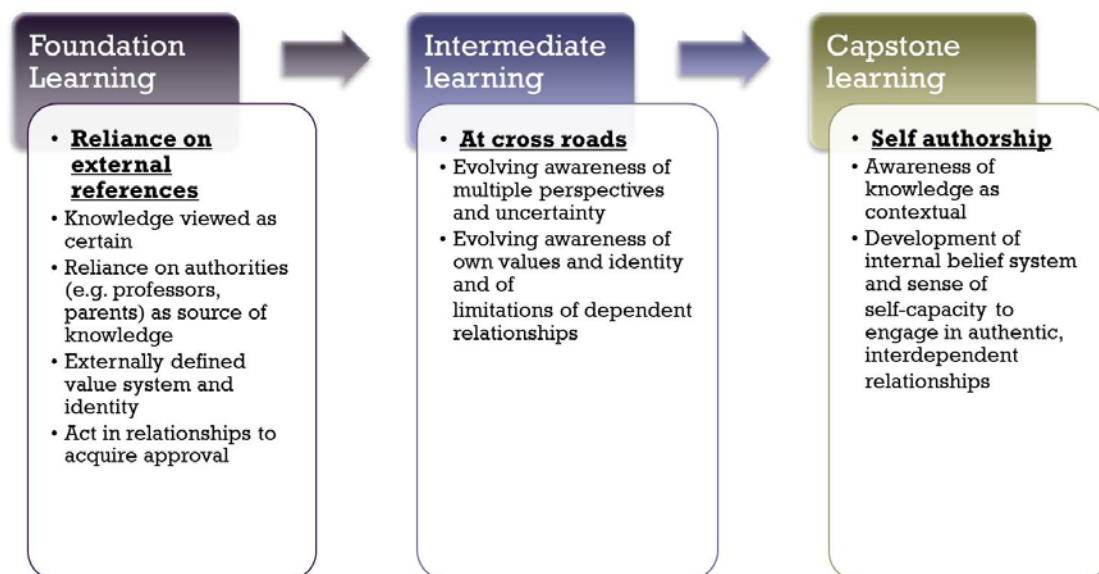


Figure 1: Hodge's mapping of learning assessment outcomes (adapted from Hodge et al., 2008)

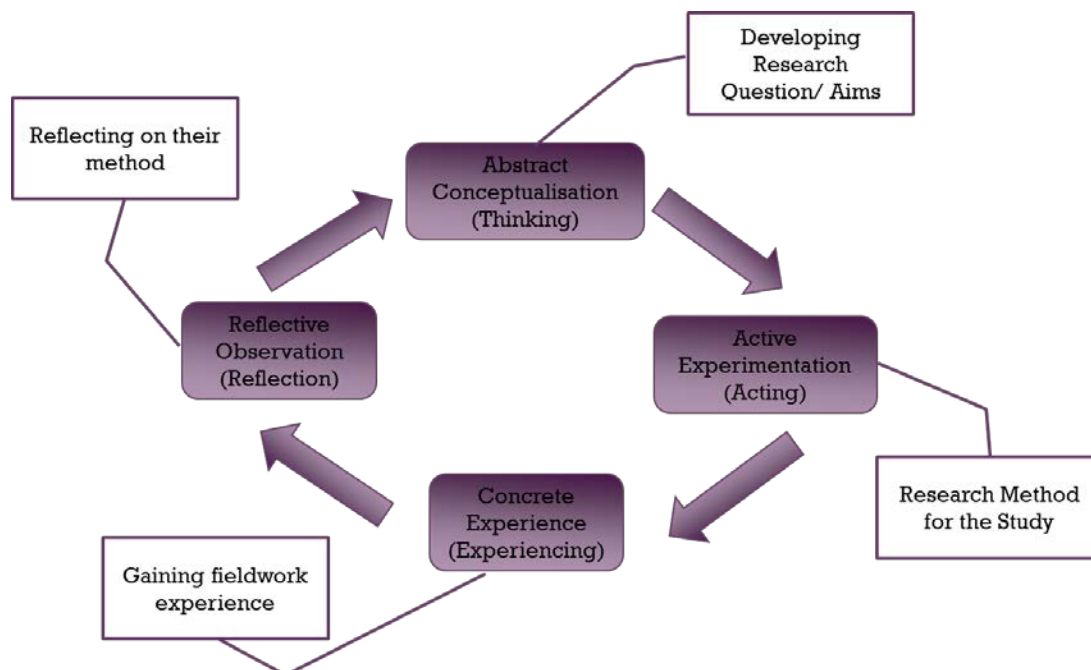


Figure 2: An example of Kolb's experiential learning cycle for research methods teaching (adapted from Kolb, 1984; Kolb et al., 2000)

Impact

The dissemination activities employed and the discussion arising from them were as follows:

- In May 2013, the project findings were presented at the HEA Social Sciences Conference. [The presentation](#) was well received as it initiated a discussion of the purpose of research methods assessment and how this should be assessed, as well as the usefulness of the framework for developing research methods assessment. The audience was interested in both the types of research methods assessment used and the extent of their use in the various countries. One delegate was interested in learning how one type of assessment (for example, proposals) might differ between countries. We would like to address this in future research.
- In June 2013 the findings from the project formed the basis of the introduction to the HEA seminar on '[Re-energising undergraduate research methods in education pedagogy](#)' and informed the seminar workshop discussion on the purpose and the assessment of research methods. The findings of the project were also presented at the seminar. Around 30 education research methods tutors attended the seminar.

Next steps

Short term

- In the medium term, we have developed [a student-friendly guide to using OERS in Social Sciences research methods](#). Funding was secured via Changing the Learning Landscapes (CLL) and there is [report blog post](#) from this project.

Medium term

- In the medium term we are looking to standardise and apply the framework for research methods assessment development which includes the use of both Kolb's and Hodge's models to help develop appropriate research assessments at a curriculum-wide level.
- Further, we would like to look at developing a course outline form, which should be filled in, or research methods which include the learning outcomes, the assessments and their relationship to the learning outcomes, as well as the formative and summative components and their relationship to the overall curriculum.

Long term

- In the long term, we would like to explore how the tutor's background and socialisation into a discipline may affect their use and implementation of various research methods assessments and methodologies.
- Further, we intend to look at an international comparison of research methods assessments in various countries to see how actual assessments differ between the countries and the extent to which these have formative and summative components.
- We would also like to look at how the different approaches to teaching research methods affects students' dissertation outputs.

References

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Ransford, H. E. and Butler, G. (1982) 'Teaching research methods in the social sciences', *Teaching Sociology*, Vol. 9 (3), p. 291-312.

Wagner, C., Garner, M. and Kawulich, B. (2011) 'The state of the art of teaching research methods in the social sciences: Towards a pedagogical culture', *Studies in Higher Education*, Vol. 36 (1), p. 75-88.

Appendix I

Details	How this resource might be useful
Assessment in action: the evolution of an undergraduate qualitative research methods course (Barria, Mueller & Wandling, 2013)	This article presents a case study of research methods course requirements at Eastern Illinois University. This article deals directly with the question of how assessment practices shaped the evolution of the research methods curriculum in this institution.
A Partnership for the Future: The Mutual Benefits of Undergraduate Research for Students and Administrators (Young and Crews, 2012)	In this paper, the author proposes the integration of undergraduate research into the broader undergraduate curriculum which is supported by the data derived from the assessment program at Truman State University. It emphasizes the importance of undergraduate research by showing the positive link between undergraduate research methods courses and accomplishment of key outcomes at undergraduate level.
Teaching Research Methods: A Writing and Research Intensive Approach (Lombardo, 2007)	The challenges of teaching research methods in political undergraduate module and tips on improving the experience for the student.
See you at the Polls: Exit Polling as a Tool for Teaching Research Methods and Promoting Civic Engagement (Evans and Lagergren, 2007)	Evaluates the use of an exit poll for introducing the basics of survey research and encouraging civic engagement for undergraduate students.
You build from the outer edges and go step by step (Igel, 2007)	A PowerPoint presentation which discusses the different views of teaching research methods i.e. as a process or a research product.
Advantages and disadvantages of various assessment methods (UTA.edu handout)	A paper which enlists different pros and cons of each assessment method which could be used for measuring students' learning. The defined criteria can advocate the suitability of different assessment methods in the undergraduate research methods courses.
Recent articles from the Quarterly (CUR.org)	The Council on Undergraduate Research (CUR) Quarterly serves as the official public "voice" of CUR to both its members and to a broader community. Its purpose is to provide useful and inspiring information about student-faculty collaborative research and scholarship from all types of institutions. The goal and function is to advance the mission of CUR.
Multiple contexts, multiple outcomes, one conceptual framework for research skills development in the undergraduate curriculum (Willison, 2009)	A research paper found on the Council on Undergraduate Research blog, explores the development of research skills embedded in regular curricula and assessment of resulting outcomes in different contexts. It is an attempt to contribute towards the comparative analysis of the significance of undergraduate research. It provides useful information regarding the assessment in undergraduate research.
Rethinking formative assessment in HE: a theoretical model and seven principles of good feedback practice (Nicol and Macfarlane-Dick, 2004)	This paper presents information regarding how assessment could be used in HE to promote students' learning.
Assessing autonomous learning in research methods courses: Implementing the student-driven research project (Vandiver and Walsh, 2010)	This is an article regarding the assessment of autonomous learning in research methods courses, especially in social science subjects. The discussion advocates the students' active participation in their own attainment of knowledge to promote their learning and hence provides basis of including the evaluation of students' practical research work in the effective assessment criteria.

Details	How this resource might be useful
<p>Assessing 21st century skills (Lai and Viering, 2012)</p>	<p>This is a paper published by National Council on Measurement in Education, Vancouver and synthesizing the research evidence which discusses the importance of five highly demanded skills in educational outcomes today. It can be helpful in the sense that we can take into account the inclusion of these skills evaluation in the assessment framework designed for the research methods courses.</p>
<p>Research methods modules and undergraduate business research: An investigation (Booth and Harrington, 2003)</p>	<p>This paper aims at constructing the framework of different teaching approaches in the research methods courses offered in different disciplines. It suggests different ways of making the research methods courses more effective and hence can contribute to developing recommendations</p>
<p>Undergraduate Research Across the Curriculum: College of Arts and Sciences (Winthrop.edu, 2009)</p>	<p>This paper considers the case studies of different research methods courses with primary focus on designing an assessment paradigm fostering essential research skills.</p>
<p>Developing a research culture in the undergraduate curriculum (Garde-Hansen and Calvert, 2004?)</p>	<p>This paper was found on the course blog of University of Gloucestershire which throws light on the collaborative research at undergraduate level using enquiry-based and problem-based learning. It provides useful suggestion regarding embedding the research culture in the undergraduate curriculum.</p>
<p>Teaching research methods to undergraduate psychology students using an active cooperative learning approach (Ball and Pelco, 2006)</p>	<p>This paper throws light on the importance of introductory research methods courses for students in social and natural sciences subject. It explores the strengths and weaknesses of using active learning approaches (research project) rather than traditional lecture based learning. It can help emphasize the use of practical use of research methods in the research methods courses.</p>
<p>Towards a pedagogical culture in research methods (Garner, Wagner and Kawulich, 2012)</p>	<p>This is a book overview which provides significant information regarding teaching, learning and assessment strategies in the research methods courses in UK.</p>
<p>Improving dissertation assessment (Pathirage, Haigh, Amaratunga, Baldry and Green, 2004)</p>	<p>This is an extract from the proceedings of the conference on Education in a Changing Environment which not only integrates the findings about the assessment quality with regards to evaluating dissertation both from the past and present literature but also suggests some effective practices for dissertation evaluation to ensure the quality and consistency of assessment.</p>
<p>International Bench-Marking Review of Best Practice in the Provision of Undergraduate Teaching in Quantitative Methods in the Social Sciences (Parker, Dobson, Scott, Wyman and Landen, 2008)</p>	<p>This report was a joint effort of ESRC and Funding Council to improve the supply of quantitatively trained social scientists. It determines the extent of quantitative methods used in different areas of social sciences, how this training fits into the overall education systems and the role of quantitative methods training in the development of social scientists both at undergraduate and post graduate level. Again it throws light on the importance of quantitative research methods at undergraduate level.</p>
<p>Building a departmental culture of research: Promoting undergraduate student development and transformation through a research methods curriculum (Helm, Bailey, McBride and LaBianca, 2011)</p>	<p>Paper presents a depiction of the undergraduate curriculum from the Andrews University which according to them is significantly contributing in the undergraduate students' identity as the researchers.</p>
<p>Innovation in assessment for social science research methods (Xenitidou and Gilbert, 2009)</p>	<p>This is a discussion on the social science blog which highlights the importance of innovation in the assessment of research methods courses and points to the related studies and papers which are to</p>

Details	How this resource might be useful
	be presented at the conference
Innovation in the assessment of social science research methods (Sloan, 2013)	This is a blog post on a collection of the current innovations in teaching research methods in various institutions which distils good practice
Fostering student centered learning through the use of active learning exercise in undergraduate research methods courses: Employing the research project model (Walsh, ????)	This is an article from the Illinois State University which advocates the use of research project model as a successful tool for engaging undergraduate students in actively learning the intended concepts and methods taught in research method courses.
Guidance in leading, promoting and supporting undergraduate research (Childs, Healey, Lynch, O'Connor and McEwen, 2010)	This is a study from the University of Gloucestershire. Focusing on the students' learning experiences and academic leadership, the study proposes certain guidelines to promote undergraduate research at institutional, departmental and course level.
Undergraduate action research: Using best practices to assess students' learning (Bell-Ruppert, 2005)	The paper highlights the use of action research at undergraduate level in order of assess students' learning during the research methods courses and students' views about using the action research as assessment tool.

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