

PRINCIPAL'S TEACHING AWARD SCHEME

PROJECT REPORT

Title of project: A longitudinal study investigating student perspectives on generic research methods courses
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Project Objectives

The project focused on the following main research questions in the context of generic research courses for taught postgraduate students at Moray House School of Education, which cater for large cohorts of around 300-500 students from diverse backgrounds and across a wide range of programmes. These courses are taught with a blended learning format with lectures online and workshops in person. The main questions that were investigated (with brief rationales) were as follows:

(1) *How is the study of research methodology and methods perceived by students?; what particular challenges does it represent as compared to other courses they take?; and how well does it support/align with their study on other courses?*

The range of student backgrounds and the range of programmes they are studying on makes the process of gaining insights into student perspectives challenging. The current feedback and monitoring systems can only go so far in gathering student views. The PTAS research funding enabled us to gather more detailed insight into student perspectives.

(2) *How is the blended learning format perceived by students in relation to other course formats?*

While blended learning provides students with access to a wider range of materials (e.g., online lectures) than would be possible in a more traditional format, it was unclear how individual students with varying backgrounds (e.g., in terms of IT literacy, educational traditions, and language skills) respond to this learning format for the study of research methods.

(3) Does the course content and format represent specific challenges for international students?

The growth of the international student population on UK taught Masters courses has generally preceded research into the specific linguistic and cultural needs of this body of students. While there is now a growing body of research focusing on international student there is relatively little published research on international students' engagement with the research methods element of taught Masters programmes.

Data Collection

The project adopted a mixed methods approach which involved: collecting questionnaire data from 239 students (including 28 different nationalities) which provided demographic data and information on prior experience of studying research methods, and in an online environment; focus groups conducted at two time points in the Masters year (February and July) which focused specifically on understandings of critical thinking and perspectives on blended learning; and reflective diaries in which a small group of students captured gradual change over time in their perspectives on the research courses and their own development as 'researchers'.

Data Analysis Outcomes

The analysis of the data divided naturally into two main areas: (1) critical thinking in relation to Masters level study and the development of a 'researcher mentality'; (2) blended learning as a way of giving a diverse student cohort a variety of options in the way they study. Summary reports on these two areas are outlined below.

Study One:

Investigating International Student Perspectives on Critical Thinking for UK Masters-level Study

Critical thinking (CT) is typically a central component of higher education in Anglophone contexts (Barnett, 1997; van der Wal, 1999), with a particular focus on this skills at Masters-level. For example, in the Scottish Credit and Qualifications Framework (SCQF) at level 11 (Masters level), *critical* is the most frequent adjective, occurring seven times, and collocating with *understanding, knowledge, awareness, analysis, evaluation, and reflection* (<http://scqf.org.uk/the-framework/scqf-levels/>). This study focuses on the UK higher education context, where there is increasing internationalization, especially on postgraduate taught programmes; and more specifically it looks at the mismatch between the assumption that CT is a generic skill of postgraduate students and the reality of student cohorts with diverse educational and cultural backgrounds. Although international students are typically required to achieve specified academic and linguistic targets to enter academic programmes, there is no guarantee that these academic qualifications encompass skills of critical analysis and thinking. A key motivation for this study was the level of confusion and anxiety among Masters students observed in relation to academic expectations. Above all, students were unsure what CT means, as one student observed:

“...because everyone have [sic] their definition about critical thinking so I think because it’s different from person to person so it’s really hard for me to say ah I really understand what critical thinking is...”

It is also hardly surprising that students are confused when there is also a lack of consensus among academics on the precise nature of CT (Halonen, 1995; Moon, 2008; Moore, 2013). For example, Moore (2013) interviewed academics in different disciplines and identified seven different strands: (1) judgment; (2) scepticism; (3) simple originality; (4) sensitive readings; (5) rationality; (6) an activist engagement with knowledge; and (7) self-reflexivity. While previous research has focused on staff perceptions of CT, there is a need for more research investigating student perspectives.

The current study aimed to investigate international students’ perceptions of CT, and also how their viewpoints changed over time. To this end, focus groups were conducted in February and July of the Masters year. 19 students (16 from China, 2 from Greece and one from Turkey) took part in the first set of three focus groups; and 8 of these students (5 from China, 2 from Greece and one from Turkey) returned in July for a second set of focus groups. In the initial focus groups, students were asked what they understood CT to be. While students identified 33 different features, only four were mentioned by more than two students: *multiple perspectives* (x 10); *weighing up pros and cons* (x 10); *NOT passive acceptance of ideas* (x 4); *arguments requiring supporting evidence* (x 4). A lack of consensus on the meaning of CT was therefore also apparent among the students. Here are some representative quotes:

- “... when someone says something or writes something you need to be critical ... and you can’t take it for granted that ok if he says so it’s true you have to find to search for what lies behind his views...” [GTP20]
- “I think critical thinking is important for us to know that there is no right or wrong answer just based on the perspective you choose...” [C2P9]
- “it’s important that you should offer reasons for the position you take” [C3P13]

The students were also presented with three statements about CT, which identified that:

- nearly all students agreed that, “Critical thinking is a key component for Masters level study.”;
- over 50% agreed that, “Critical thinking is a new approach to learning for me”;
- six participants agreed that, “Critical thinking makes me feel uncomfortable”.

The anxiety expressed in the third statement related predominantly to CT being expected in written assignments, as well as to discomfort with being in grey areas:

- “I am always uncertain about whether I was being critical or not in my assignment and it [sic] sometimes feel insecure.” [C2P8]
- “it is really difficult because there is not one truth there are many truths so I think it’s not the easiest thing to do...” [GTP20]

In the second set of focus groups, the participants were asked which of the identified features from the 1st focus groups they most and least associated with CT; and this was followed by

discussion on trajectories in perceptions of CT during the Masters year. Although findings from the second set of focus groups were more limited by the reduction in participants, a general sense of increased positivity and confidence in relation to being critical could be observed. Some students also talked about finding their own voice.

A further reflection related to CT as a generic and transferable skill gained through postgraduate study:

- “...it’s just special skill I think it’s for example maybe when we graduate from here we will forget what we learnt in the specific courses ... but critical thinking is a skill that we can take away...” [C5P9]

In terms of pedagogy at Masters level, the key implications of these findings relate to the importance of making implicit expectations explicit, and thereby avoiding what Turner (2011, p.21) terms the “non-pedagogy, of osmosis”. It cannot simply be expected that students from a diverse range of social, cultural and educational backgrounds will pick up CT as they go along. An awareness of expectations related to CT needs to be built into the curriculum of content courses and/or courses need to be offered in which this skill is in itself taught and assessed for credit, alongside other components of academic literacies (Wingate, 2015). This approach can be expected to relieve students’ anxieties and accelerate processes of adaptation to Masters-level study.

This research was essentially exploratory, as it took place with a relatively small number of participants in one school. However, further empirical work can build on the conceptualizations of CT identified in this project to conduct larger scale empirical work across different subject disciplines, and with students from different linguistic and educational backgrounds.

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Study Two:

Blended Learning Delivery on a Suite of Masters-Level Research Courses in Education

Blending face-to-face and online delivery offers opportunities for tertiary students and academics alike (Stubbs et al. 2006). Previous studies suggest online materials complement traditional forms of instruction and can help achieve more effective student learning (Lei 2010), and that online learning activities can have a positive impact on achievement in the face-to-face classroom (Lopez-Perez et al. 2013, Lim & Morris 2009, O’Toole & Absalom 2003).

Blended learning lets students study material at a place and time of their choosing (O'Connor et al. 2011) and exposes them to a greater variety of learning tools, enhancing their overall experience (Eugenia 2008). Online tasks help teachers clarify information and concepts presented in the classroom (Brothen & Wambach 2004). Blended learning can enhance students' ability to reframe and reinterpret existing knowledge, values and beliefs (Cooner 2010). Students have described it as 'personally meaningful' (Mayes & De Freitas 2006), a characterization likely attributed to its flexibility and individual customization. Many have reported referring back to online lectures to reconsider them on the basis of new experiences. Osguthorpe & Graham (2003) found blended methods to improve pedagogy, increase access to knowledge, foster social interaction, increase the teacher's presence in the learning process, improve cost effectiveness and enhance ease of revision. Chung & Davis (1995) reported that blended instruction provided learners with greater control over the pace of learning, instructional flow, selection of resources and time management.

Student opinions on blended learning are mixed but largely negative. Many view online tasks as additional or extra-curricular work, choosing not to participate (Orton-Johnson 2009). Many who do engage eventually abandon online learning tasks, perceiving traditional texts as more 'authentic' sources of academic knowledge (Forsyth & Archer 1997, Johnson & Kiviniemi 2009). Students who lack home Internet access are also profoundly disadvantaged (Cooner 2010). Students often experience frustration, difficulty and confusion utilising web-based study materials (Hara & Kling 2000, 2002; Parkinson et al. 2003). The literature, however, does not provide a clear picture of specific challenges for specific modes of technology. Indeed, most research evaluates innovations in course design or teaching methods (Sharpe & Benfield 2005) rather than student experience. Without a clear understanding of how students use and experience online resources, the design of blended learning materials is often based on assumptions. Care needs to be taken to select technological approaches and conventional teaching methods that enhance the targeted learning outcomes. Student access is important in this process as well, and requires various ways of accessing content (Davis & Fill 2007, Topper, 2007).

Since 2010, the Moray House School of Education at the University of Edinburgh has delivered three courses, on understanding, conceptualising and planning research, for MSc students across several taught postgraduate programmes, to predominantly international cohorts of 300 to 500 students each year. To make the most of staff resources, these are delivered using a blended learning model, with videos and other VLE content supported by face-to-face workshops. This study examined the strengths and weaknesses of this delivery model from the student perspective, investigating how students view blended learning in relation to other course formats.

The study drew on a sample of the 2013-14 MSc cohort at Moray House using a combination of surveys, diaries and focus groups throughout the year. A baseline questionnaire collected demographic data and information on prior experience of studying online. The 239 respondents were 90% female and 10% male (reflecting the student body overall) and represented 28 nationalities, including 170 from China. 82% of respondents had not lived in an English-speaking environment previously, and 57% had no previous experience of studying

online. 98% said they use the Internet regularly, 77% felt confident about using it, and 53% felt comfortable with learning online.

Focus groups were conducted with 19 students halfway through the academic year and 8 students after they had completed all three courses. A small number also completed reflective diaries aimed at capturing changing perceptions of course challenges over time.

The first groups were asked to rank by usefulness, and then to discuss:

Watching videos

Reading video transcripts

Reading books and articles

Using the VLE discussion board

Having tutor input

Participating in group work and face-to-face discussion

Nine out of nineteen students nominated the videos as most or equal-most useful, noting their repeatability, their value for improving listening ability in English, and their informal and entertaining aspects. The video transcripts were also valued for improving understanding, particularly when lecturers spoke with accents or at a pace that was hard for non-native-English speakers to follow. Most nominated the discussion board as the least useful resource. Students felt they were not properly initiated into using it, and that it was hardly ever used. Some gave cultural reasons for not using the board, saying that Asian students worried about asking questions that may bother others, and preferred to email tutors instead. Face-to-face discussion was considered a more intense form of discussion.

In the final groups, students were asked whether they had revisited any of the materials from the three courses to help with their assignments, other courses, or dissertation. Little of the uniquely online material was revisited; most nominated the readings. Some students now saw value in the discussion boards, however, even if they had not used them. The questions and comments posted by others were seen as useful, and questions posted by tutors to spark discussion were particularly important. Regular tutor input was seen as key to improving discussion boards' usefulness. Anonymous posting would also be welcome, encouraging those with lower confidence to ask questions.

In conclusion, we observed some of the problems with blended learning reported in the literature, but there were indications of practical steps that could address them. Participants valued videos for extending the readings and for their repeatability. Transcripts enhanced their value. Discussion boards went largely unused, but stronger tutor input and direction, plus a provision for anonymous posts, could turn this around. Students will not use an online resource unless they see value in it. Improved direction from and engagement by course developers, organisers and tutors adds value.

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Research Dissemination

Presentations

- (1) Moray House School of Education Cross-Institute Research Seminars, February 2015. Title: *Investigating Student Perspectives on School Wide Research Courses*.
- (2) Annual PTAS Forum organized by the Institute of Academic Development at the University of Edinburgh, June 2015. Title: *Investigating Student Perspectives on School Wide Research Courses*.
- (3) Annual Conference of the Society for Research in Higher Education, Celtic Manor, Wales, December 2015. Title: *Investigating International Student Perspectives on Critical Thinking for UK Masters-level Study*. Presenters: Kenneth Fordyce and Ioanna Papageorgiou.
- (4) Annual Conference of the Society for Research in Higher Education, Celtic Manor, Wales, December 2015. Title: *Blended Learning Delivery on a Suite of Masters-Level Research Courses in Education*. Presenters: Rory Ewins and Pete Allison.

Publications

Manuscripts are being prepared for two papers covering the findings on critical thinking and blended learning, respectively.

Research Impact

- (1) Key findings from this study were included in the review of the School of Education's research courses conducted by Professor Judy Robertson in 2015.
- (2) Findings related to international students' perceptions of critical thinking are likely to contribute to ongoing developments in the internationalization of the curriculum at Moray House School of Education and, potentially, more widely at the University of Edinburgh.