UCL

A Short Introduction to Pedagogic Research

The Academic Careers Framework at UCL recognises that education activities which support students to learn can strengthen an application for promotion. This includes contributing to pedagogic research.

When applying for UCL Arena Fellowships (nationally recognised teaching awards accredited by the Higher Education Academy), contributing to pedagogic research is recognised in the UK Professional Standards Framework as an area of activity [A5] and as a professional value [V3]. At the heart of both the UKPSF and pedagogic research is a philosophy of reflective practice, dissemination of research, engagement of students, and attention to disciplinary specificity.

Pedagogic research, also known as the scholarship of teaching and learning (SoTL), or education enquiry, is an established field of academic discourse involving carefully investigating your teaching practice and in turn developing the curriculum. It requires a systematic and evidence-based study of student learning, often through a small-scale research project engaging students. Pedagogic research is a form of self-study, and/or action research involving critical reflection and reflexivity on current practice, which gives way to new knowledge. It encourages investigating learning, including what works and what does not. As with any rigorous research endeavour, you will need to be well-informed and critically reflective.

Pedagogic research has the goal of improving the quality of education locally and further afield, through dissemination of best practice to colleagues at UCL and beyond, in conferences and in either discipline-specific education journals or education-focused journals. Pedagogic research brings together key objectives in UCL's Education Strategy, by encouraging active connections between education and research, reflection on and development of our education provision, and connections between staff and students in partnership to improve education.

- **UCL Connected Curriculum**
  www.ucl.ac.uk/connectedcurriculum
- **UCL Arena**
  www.ucl.ac.uk/arena
- **UCL ChangeMakers**
  www.ucl.ac.uk/changemakers
- **UCL Education Strategy**
  https://www.ucl.ac.uk/teaching-learning/education-strategy

Pedagogic research allows educators to examine their own practice, reflect on successes and challenges, and share experiences so others can learn from this, improving education more widely.

Consider aligning your research to UCL's education strategy

A number of pedagogic research projects focus on Connected Curriculum, specifically through uncovering answers to the following:

"What kinds of impact, if any, does UCL's research-based education strategy (Connected Curriculum) have on changing real practice within and across the disciplines, at UCL and beyond?"

- Find out more and get involved in this research, connectedcurriculum@ucl.ac.uk

Pedagogic research will support a community of scholars

Making transparent how learning is possible and developing practice may well involve collaboration with students in research activities and data collection. Students are well-suited to be co-researchers on pedagogic research projects. Engaging with the existing body of scholarship will position your work in a larger field, and allow you to contribute to the community while learning from others. Finally, sharing your findings in public forums to help others develop practice will support community-based and shared knowledge construction.

Pedagogic research resembles rigorous disciplinary research

"You spend some time looking at different approaches to teaching and learning within a specific field of knowledge and about learning in general in that area. You research how the knowledge is known and practised and applied within the discipline and you consider what others have done and then you plan your program and you monitor the results and improve it.

It is also about writing about it and communicating it to others in the larger arena. You communicate what you do locally so other students within the discipline or profession can be helped to learn and more can be known about how the learning is achieved and how thinking and knowledge is structured in the areas. It's about reflective practice and it's about active dissemination of that practice for the benefit of learning and teaching." (Trigwell et al. 2000: 167)

Subject disciplines have distinctive approaches to conducting research into education. For more on paradigmatic approaches to pedagogic research see:
Russell, N. (2014). "Approaching Educational Enquiry." The University of Sheffield.

2

6 key steps to develop your own pedagogic research project

1. Identify the problem and set clear goals

Identify the focused problem you wish to consider. You may already know the intervention or practice you would like to improve, but it is important to have clear goals in mind. You may like to focus on overcoming a challenge you face in your education practice. Taking a problem-based approach will make connection between pedagogic research and discipline-specific issues. For example, you could focus on massification and large class teaching, or developing cross-cultural understanding in diverse political science courses.

A helpful place to start is to identify a gap in the existing pedagogic research. It's also useful at this early stage to begin thinking about potential audiences for disseminating your work. This will allow you to strategically frame the project in line with what stakeholders need to know; demonstrating the initiative has value will make the work more publishable and relevant to your career development.

- *What do I want to know about student learning in my discipline and/or how do I want to develop it?*

- *What do I want to do to develop my practice?*

- *Who will I communicate my findings to?*

- *How will this goal advance the work of other scholars?*

2. Prepare adequately and begin to implement your development

You'll want to be as prepared as possible. Conducting a literature review relevant to your discipline and education context will help ensure your project has not already been done and help you refine the study and methodology.

Begin to implement your enhancement activity, for example through revising rubrics, assessment criteria or learning activities. Avoid conducting a controlled experiment, where only some students receive the benefit of development. Set a research question that allows you to explore, understand and improve student learning in specific contexts. Discuss your plans with colleagues and students. Consider engaging collaborators.

Find out if an ethics application is required. At UCL, education research is generally considered 'low-risk', involving completing a simple 'low risk' ethics application form for Chair's review. Allow on average two weeks for review. As part of the application process a participant information sheet and consent form need to be produced if you are recruiting participants to your study. Data protection registration is required only if you are using 'personal data'.

- *What will my students learn and why is it worth learning?*

- *Who are my students and how do students learn effectively?*

- *What can I do to support students to learn effectively?*

- *What does the literature tell me about this issue?*

- *What activities will I design to improve education?*

- *What ethical implications are there?*

- *How will I measure and evaluate the impact of my practice on student learning?*

The British Educational Research Association (BERA) offers a wealth of information on ethics: https://www.bera.ac.uk/researchers-resources/resources-for-researchers

6 key steps to develop your own pedagogic research project

3. Establish and employ appropriate methods of enquiry

In order to investigate changes to education practice, a range of methods could be employed, including reflection and analysis, interviews, focus groups, questionnaires and surveys, content analysis of text, ethnography, phenomenography, observational research and speculation. Capturing students' views are important; they will value the opportunity to be involved in improving education at UCL. Treat your programme as a source of data to answer interesting questions about learning: collect data available at your fingertips. Your colleagues may also be able to contribute to the research. Be sure to gain participants' consent.

- *What methods do I need to employ to measure my practice?*

- *Who will I engage?*

- *What are my students doing as a result of my practice?*

For more on methods consult:

Cohen, L., Manion, L., and Morrison, K. (2007). *Research Methods in Education.* London: Routledge.

Stierer, B. and Antoniou, M. (2004). "Are there distinctive methodologies for pedagogic research in higher education?" *Teaching in Higher Education* 9, no. 3: 275–285.

4. Evaluate results

Analyse your data using appropriate strategies. Draw appropriate conclusions and critically reflect on your findings and intervention. Return to earlier stages if further development or data collection is needed, before continuing with the project.

- *How has student learning changed as a result of my practice and what evidence do I have?*

- *What lessons have I learned?*

- *What adjustments have been made to my teaching?*

5. Prepare your presentation

Begin to write up your work, presenting the evidence and results of your intervention. Use the evidence you gathered to design and refine new activities, assignments and assessments for further iterations. Be critically reflective.

- *What worked and what did not go according to plan?*

- *What can others learn from my project?*

- *How has enhancement developed student learning?*

- *What makes my intervention worth implementing?*

6. Share your project with others

Go public with your project, and communicate your findings – whether work-in-progress or complete – with peers, who can comment, critique and build on this work. Engage your students in the work and invite feedback. Share results internally (at teaching committees, or in reports), across UCL (at the UCL Education Conference, or a UCL Arena Exchange Event), or internationally (in open-access publications, and through conference presentations). More dissemination ideas can be found in this guide.

- *What can engaging others tell me about this development?*

- *What impact does my work actually have on others interested in developing their practice?*

This may lead to you examining the medium and long-term impact of the education development project. Engaging multiple stakeholders over a long period of time may result in returning to step 1, through another iteration of development.

Projects with maximum impact investigate learning processes, partner with students in the research and education development, engage the body of pedagogic research, and critically reflect on changes; they are relevant to a wide audience, and communicate through open-access forums.

"Teaching is the most impactful thing we do as academics in higher education. The sheer number of students we encounter and influence over our careers is incredible. Pedagogic research (SoTL) offers an opportunity for us as academics to refine our practice and to generate understanding through evidence of what works and doesn't in student learning. In a research-intensive institution, like UCL, pedagogic research offers us the chance to link the teaching and learning space more clearly with our research agendas, whilst at the same time contributing to opening up new opportunities to foster student learning."
David J. Hornsby, Deputy Head of Department (Education), UCL STEAPP

An example of Pedagogic Research at UCL

"Recognising that students could better engage with core writing concepts through acting like a teacher, I designed peer review exercises to follow draft submissions of work, as part of a module I coordinate in The Bartlett School of Architecture. After consulting the literature, I realised that there was very little by way of guidance on how to set this up.

Following the implementation phase, I held a focus group with students to find out their views, which were overwhelmingly positive. This enhancement project also improved students' marks. I published this work and placed it on the module reading list, which helps underscore the value of this pedagogic tool and makes transparent the learning process."

Brent Carnell, UCL Arena Centre for Research-based Education and The Bartlett School of Architecture

- Carnell, B. (2016). "Aiming for autonomy: Formative peer assessment in a final-year undergraduate course." *Assessment & Evaluation in Higher Education* 41, no. 8: 1269–1283.

More support

The following initiatives and opportunities are available to colleagues to support research.

- Funding from UCL ChangeMakers to work in partnership with students to develop education www.ucl.ac.uk/changemakers
- Funding from the Arena Centre for Research-based Education
- Meet with colleagues experienced in pedagogic research, including from the UCL Institute of Education or the Arena Centre for Research-based Education
- Funding to conduct a large pedagogic research project may be available from the Higher Education Funding Council for England (HEFCE) http://www.hefce.ac.uk/

Dissemination

Sharing your findings and intervention is an important part of pedagogic research.
Look to disseminate through the following forums.

With the UCL community

- Local teaching committees
- Faculty education events
- Write a case study for the UCL Teaching & Learning Portal
  https://www.ucl.ac.uk/teaching-learning/case-studies
- Propose to deliver a one-hour Arena Exchange session
  https://www.ucl.ac.uk/teaching-learning/professional-development/arena-open/arena-events/exchange-seminars
- Present at the annual UCL Education Conference
  https://www.ucl.ac.uk/teaching-learning/news-events/ucl-education-conference

At a UK higher education conference

- Assessment in Higher Education
  https://aheconference.com/
- British Educational Research Association
  http://www.bera.ac.uk/events
- Higher Education Academy Annual Conference
  https://www.heacademy.ac.uk/training-events/events
- Higher Education Conference & Exhibition
  https://heconference.co.uk/
- Higher Education Funding Council for England Conference
  http://www.hefce.ac.uk/news/Events/
- Society for Research into Higher Education
  https://www.srhe.ac.uk/
- Staff and Education Development Association
  https://www.seda.ac.uk/events/residential
- Universities UK
  http://www.universitiesuk.ac.uk/events

A calendar of many major UK events and conferences is available from WONKHE
http://wonkhe.com/events/

At an education conference beyond the UK

- Educause (Information Technology in Higher Education, USA)
  https://www.educause.edu/
- Higher Education Research and development Society of Australia
  http://www.herdsa.org.au/conference
- International Society for the Scholarship of Teaching and Learning
  http://www.issotl.com/
- Society for Teaching and Learning in Higher Education (Canada)
  https://www.stlhe.ca/

In a pedagogy-based book series

- Palgrave's Critical University Studies Series
  http://www.palgrave.com/gb/series/14707

In a higher education journal, cross-disciplinary or discipline-specific

- *Active Learning in Higher Education*
  http://journals.sagepub.com/home/alh
- *Assessment and Evaluation in Higher Education*
  http://www.tandf.co.uk/journals/authors/caehauth.asp
- *Biochemistry and Molecular Biology Education*
  http://iubmb.onlinelibrary.wiley.com/hub/journal/10.1002/(ISSN)1539-3429/
- *Studies in Higher Education*
  http://www.tandfonline.com/toc/cshe20/current
- *Teaching & Learning Enquiry*
  http://tlijournal.com/

An updated long list of journals, both cross-disciplinary and discipline-specific, can be found on the UCL Institute of Education library website http://libguides.ioe.ac.uk/heteaching/subjectjournals

Find out more

Further sources on pedagogic research

- Bass, R. (1999). "The scholarship of teaching: What's the problem?" *Inventio: Creative Thinking about Learning and Teaching* 1 (February), no. 1.
- Boyer, E. (1990). *Scholarship Reconsidered: Priorities of the Professoriate*. Princeton, New Jersey: Carnegie Foundation for the Advancement of Teaching.
- Cleaver, E., Lintern, M. and McLinden, M. (2014). *Teaching and Learning in Higher Education: Disciplinary Approaches to Educational Enquiry.* London: Sage.
- Fanghanel, J., McGowan, S., Parker, P., McConnell, C., Potter, J., Locke, W., Healey, M. (2015). "Defining and supporting the Scholarship of Teaching and Learning (SoTL): A sector wide study." York, UK: Higher Education Academy.
- Felten, P. (2013). "Principles of good practice in SoTL." *Teaching & Learning Inquiry* 1, no. 1: 121–125.
- Fung, D. (2017). "Strength-based scholarship and good education: The scholarship circle." *Innovations in Education and Training* 54, no. 2: 101–110.
- Greene, M. J. (2014). "On the inside looking in: Methodological insights and challenges in conducting qualitative insider research." *The Qualitative Report* 19, no. 29: 1–13.
- Healey, M. (2000). "Developing the scholarship of teaching in higher education: A discipline-based approach." *Higher Education Research & Development* 19, no. 2: 169–189.
- Healey, M. "Resources." Professor Mick Healey Higher Education Consultant and Researcher. http://www.mickhealey.co.uk/resources *This page has links to a range of resources including bibliographies and handouts.*
- Hutchings, P. (2000). "Approaching the scholarship of teaching and learning." In *Opening Lines: Approaches to the Scholarship of Teaching and Learning*, by P. Hutchings, 1–10. Mento Park: The Carnegie Foundation.
- Hutchings, P., Huber, M. and Ciccone, A. (2011). *The Scholarship of Teaching and Learning Reconsidered*. San Francisco: Jossey-Bass.
- Koster, B. and van den Berg, B. (2014). "Increasing professional self-understanding: Self-study research by teachers with the help of biography, core reflection and dialogue." *Studying Teacher Education* 10, no. 1: 86–100.
- O'Brien, M. (2008). "Navigating the SoTL landscape: A compass, map and some tools for getting started." *International Journal for the Scholarship of Teaching and Learning* 2 (July), no. 2: 1–20.
- Rowland, S. and Myatt, P. (2014). "Getting started in the scholarship of teaching and learning: A "how to" guide for science academics." *Biochemistry and Molecular Biology Education* 42, no. 1: 6–14.
- Tight, M. (2012). *Researching Higher Education*. Milton Keynes, UK: Open University Press.
- Trigwell, K., Martin, E. Benjamin, J. and Prosser, M. (2000). "Scholarship of teaching: A model." *Higher Education Research & Development* 19, no. 2: 155–168.

Advice to help early-career researchers develop their pedagogic research portfolio

- https://www.bera.ac.uk/blog/early-career-researchers-20-tips-for-career-development

Other introductory sources, offering guidance in pedagogic research

- A Guide from the Vanderbilt University https://my.vanderbilt.edu/sotl/doing-sotl/
- ISSOTL online resources http://www.issotl.com/issotl15/node/22

Brent Carnell, 21 November 2017
For more help or to discuss:
b.carnell@ucl.ac.uk or arena@ucl.ac.uk