# Educational Development Unit: Educational research and evaluation

Are you considering evaluation and/or research?

The table below (based on Cohen et al, 2018) provides a summary of some distinguishing features - Although the two processes often overlap, the distinctions may help to provide some conceptual clarity for practical purposes:

| Research | Evaluation |
|---|---|
| Contributes to knowledge in the field, regardless of its practical application; provides empirical information – i.e. "what is". <br><br> Conducted to gain, expand and extend knowledge; to generate theory, "discover" and predict what will happen. | Designed to use the information / facts to judge the worth, merit, value, efficacy, impact and effectiveness of something – i.e. "what is valuable". <br><br> Conducted to assess performance and to provide feedback; to inform policy making and "uncover". The concern is with what has happened or is happening. |
| Designed to question, demonstrate or prove. <br><br> Provides the basis for drawing conclusions, and information on which others might or might not act – i.e. it does not prescribe. | Designed to improve. <br><br> Provides the basis for decision making; might be used to increase or withhold resources or to change practice. |
| Provides information for others to use. Disseminated widely, perhaps to specific audiences &/or specific journals. | Provides information for a local audience as evidence for adjustment; not for the public domain. |
| Judgements are made by peers; standards for which include: validity, reliability, accuracy, causality, generalizability, rigour. Should be publishable. | Judgements are made by stakeholders; standards for which also include: utility, feasibility, perceived relevance, efficacy and fitness for purpose. |
| To be publishable it should be based in relevant theory AND normally requires ethical approval. | Should be based in practice and relevant for and understandable by practitioners and stakeholders. Does not normally require ethical approval – is not designed to be publishable. |

## What is/are your question(s)?

If you are thinking of research:

What are your research questions or hypothesises?
Are they theoretically underpinned, relevant and interesting and accessible to your target audience?
Who are your target audience?
Are you aiming at practitioners and a disciplinary audience or are you trying to reach a wider cross-disciplinary or general educationalist audience?
If you are thinking of evaluation:
What are the objectives of the change/intervention in practice?
What would count as success & how/when would you know?
Whose performance, opinions, views or perceptions matter?
What are you comparing against – is there a base-line or previous performance you can capture, are there different groups to compare or are you comparing against some 'ideal'?

**What can be measured?**

Will exam or test scores provide a surrogate measure of learning?
Are there piloted, established, inventory-type assessments that are believable measures of understanding?
Can questionnaires capture views – if so, is the sample size and access appropriate?
Are there any time critical questions?
Are on-line metrics &/or institutional data likely to be interesting, relevant or useful?

**What can't be measured?**

Are you interested in things that are harder or impossible to measure such as attitude, confidence or identity?
How might you capture these?
Consider qualitative approaches – interviews, focus groups, observation – hear validity comes from depth of interpretation
Do you have the ability / time to pursue, analyse and interpret this type of approach?

**Do you need to consider research ethics?**

While ethical approval is often NOT needed for evaluation, it will be required for anything that is to be published. Approval cannot be granted retrospectively.
Core ethical principles of Respect for persons, Beneficence and justice should be followed irrespective of whether you are aiming at publishable research or simply evaluating an educational intervention.
Ethical approval may be required from:

EERP – for low 'risk' educational research
MEEC – for educational research involving Imperial medical students
ICREC – for educational research involving problematic or sensitive issues
IRAS – for educational research involving patients, patient data or potentially NHS staff or premises

**Further information**

**Training in educational evaluation and research methods as part of:**

PG Cert www.imperial.ac.uk/staff/educational-development/programmes/pg-cert-ult/
MEd www.imperial.ac.uk/staff/educational-development/programmes/med-in-university-learning-and-teaching/

Active Learning course www.imperial.ac.uk/staff/educational-development/workshops/active-learning/

Evaluation workshop http://www.imperial.ac.uk/staff/educational-development/workshops/

Medical Education Research Unit www.imperial.ac.uk/medicine/meru/about-meru/

CHERSNet http://www.imperial.ac.uk/staff/educational-development/networks-and-events/chersnet/

**Teaching toolkit navigator - contact Mark Anderson**

**Education literature databases that Imperial has access to:**

British Education Index (BEI) https://www.ebsco.com/products/research-databases/the-british-education-index
Educational Resources Information Centre (ERIC): https://eric.ed.gov/

**Further reading (available from the library)**

Cohen, L, Manion, L & Morrison, K. (eds) (2007), Research Methods in Education (Abingdon, Routledge
Savin-Baden, M. & Howell Major, C. (2013) Qualitative Research.  The essential guide to theory and practice. Abingdon: Routledge

**Education e-books** www.imperial.ac.uk/admin-services/library/subject-support/education/e-books/