



RESEARCH IN EDUCATION 1 GETTING STARTED

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WHY?

As academics

- Part of scholarly practice
- Using pedagogical theory / educational research to improve teaching

Scholarship of Learning and teaching

- Asking and answering questions about student learning in the discipline.

SCHOLARSHIP OF LEARNING AND TEACHING

- Evaluation of own teaching
- Evaluation of courses / programs and improvements made to courses
 - activity structure; content; student satisfaction; student learning /attainment

Basically...

- Continual improvement in learning and teaching – plan, implement, evaluate and reflect.
<http://www.ltu.unsw.edu.au/content/RandI/solt.cfm?ss=5>
- Inquiry and communication are linked in scholarship → publish or disseminate findings

L&T RESEARCH- HOW?

Different to scientific trials

- Less scientific?! But uses scientific approach and should still be rigorous
- Social methodological research >>>scientific trials
- Observational or reviews of before/ after
- Qualitative or quantitative or both
- Reflective narrative is OK - If based on own/ student perceptions –mainly subjective
- Can vary from very basic data collection /analysis to action research (participatory, emancipatory, social)

L&T RESEARCH - A SUMMARY

- Essentially - you may be casting a broad net
- Need to straddle both your own discipline and L&T theories
- Need to be critical of measures / sources of information that you are using for this to be rigorous

“Doing good evaluation is like doing good research. In both cases, you are trying to answer some important questions about an important topic. The key to doing both activities well is a) identifying the right questions to ask and b) figuring out how to answer them” (Fink, 1995).

Source: L. Dee Fink (n.d.). Ideas on Teaching. Improving the Evaluation of College Teaching. <http://www.ou.edu/pi/tips/ideas/evaluation.htm>

RESEARCH = HOW?

- Informal or formal
 - depends on time / \$ / staff
- Simple / complex
 - Depends on how much / what you want to know
- Ethical approval required?
 - More often than not
- What do you need to do?
 - Make a start – discuss, review (literature, similar research) and plan

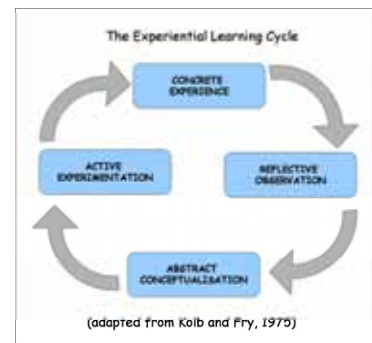
INFORMAL RESEARCH

- Critical self-evaluation
 - Reflection
 - Peer support
 - Review of assessments results (indirect, objective)
 - Feedback (direct, subjective- objective)
- ❖ From self-reflection
❖ From peers
❖ From students

INFORMAL RESEARCH METHODS

- Reflection === Critical self-evaluation
 - self and / or students – can use one-off reflections, but journals, video-diaries, etc work better as cyclical
 - Experiential learning cycle (Kolb and Fry, 1975)
- Feedback / Survey
 - During or after class
 - Verbal feedback / discussion with open questions
 - Written: freeform, or simple questions (e.g. CIQ - Brookfield)

THE REFLECTIVE PRACTITIONER EXPERIENTIAL LEARNING CYCLE



THE REFLECTIVE PRACTITIONER

- Boud, Keogh and Walker (1985)

“returning to the experience, attending to the feelings and re-evaluating the experience based on current knowledge and intent, and integrating this new knowledge into your conceptual framework.”
- Brookfield (1995) <http://stephenbrookfield.com/ciq.html>
 - = a framework for reflective practice in L&T “4 lenses”
 - our autobiographies as learners
 - our colleagues' experiences and perceptions
 - our students' eyes
 - the theoretical literature

CIQ EXAMPLE ADAPTED FROM BROOKFIELD (1995)

Phase 3 Biomedical Sciences Multidisciplinary Seminar 5 minute Evaluation

Seminar: Post-surgical case **Date:** 02.09.08
Please take 5 minutes **immediately** after completing this seminar to fill in this form.

This questionnaire is anonymous, so please do not include your name on the form. Thank you for taking time to do this. What you write will help us to make the Phase 3 Biomedical Sciences multidisciplinary case-based seminar series more responsive to your needs and concerns.

1. What were the best features of this seminar?
2. What were the worst features of this seminar?
3. Which particular explanation or example in this seminar was the most helpful?
4. Which particular explanation or example in the seminar was the most puzzling or confusing?
5. What about this seminar surprised you the most? (This could be something about your own reactions to the material, or something that you did or learnt, or anything else that occurs to you).
6. Any further comments? *P.T.O. for more space. Thank you for your feedback*

FORMAL RESEARCH

For reports or research for publication:

- Peer-evaluation of teaching
- Formal mentoring systems
- Formal surveys - e.g. CATEI
- Assessment review
- Formal evaluations – one-off or repeated

CATEI

http://www.med.unsw.edu.au/medweb.nsf/page/CATEI_FAQ

- 3 forms
- Compulsory routine evaluations at UNSW
- Online evaluations have lower (<50%) uptake
- Essential element of teaching in performance reviews
- Part of university evaluation of faculty teaching performance

MORE FORMAL EVALUATIONS

- **Assessment review**
 - Alignment
 - Formative, summative
- **Questionnaire-based Evaluations**
 - Medical Faculty (e.g. PEIG= MedSEQ)
 - UNSW: Student Satisfaction Survey and Course Evaluation Questionnaire
 - Discipline departments
 - small networks of teachers or individual teachers

FACULTY EXAMPLES:

Small - Medium Scale Research

- Gary Velan – Biomed science review
- Chris Hughes – Review of virtual patient
- Rachel Thompson et al – Wiki assignment evaluation
- Chinthaka Balasooriya- Student learning
- Eilean Watson – eMed evaluations

Large Scale Research

- PEIG - MedSEQ

QUESTIONS TO ASK YOURSELF

Why?

- Your purpose
- What need is there for this?
- What is the problem?
 - e.g. Personal teaching evaluation
 - e.g. Improvement needs assessing as part of continual cycle i.e. New / improved course, activity, assessment,
 - e.g. Required - Asked to by Dept head/ Uni etc
 - e.g. Curiosity..

WHAT IS YOUR QUESTION?

- Justify this!
- Lit search – at the beginning, is essential
- Discuss this with others
- Review in light of literature

- Often not as clear a question as would get in scientific trial etc
- May be more than one question that needs answering

How?

Type of evaluation / study depends on:

- Data sources available/ possible:
 - Data already collected e.g. eMed, CATEI, SSS etc
 - Data to be collected – how? E.g. survey, questionnaire, focus groups, begin new database
- Type of data
 - Qualitative / Quantitative /Mixture
 - Instruments vary accordingly –e.g. focus groups, questionnaires, interviews etc

METHODS AND DESIGN

- Triangulate – methods, sources, data-collection or investigators (Berg, 1989, pp 5-8)
 - Ensure that you compare subjective with more objective sources
- Study design
 - Observational
 - Inferential, review (before/ after)
- Research instruments – multiple and varied
- Secure Database required
 - Excel / SPSS/ other

WHAT WITH?

Resources:

- \$\$\$
- Staff and students involved, collaborators, mentors
- Pedagogy / theory / standards

ETHICS REQUIRED?

- Usually needed but why? = non-exploitative, consent obtained, confidential management of data, feedback to participation
- Even CATEI data, despite being de-identified, cannot be analysed for publication unless ethics has been granted
- No “blanket” ethics approval covering this use of CATEI data
- HREA /HREC
http://www.gmo.unsw.edu.au/Ethics/HumanEthics/HumanEthics_index.html

- MedEd seminar online

WHAT CAN L&T RESEARCH ACHIEVE?

- Can explain why things work / don't work
- Design better learning materials, activities, courses
- Help to substantiate our disciplines and mould the institutions we work within = *our communities of practice*
- Publications and conference papers
- Better teachers, better colleagues, better students
- Helps us to appreciate the students' viewpoints and empathize with our students as learners

MORE INFORMATION

MedEd Seminar Meetings - online

- Research in Education 2 = Ethics approval and design
- Research in Education 3 = Writing up and getting published
- Research in Education 4? = Stats and methods for L&T

Others:

- L&T@UNSW workshops

http://learningandteaching.unsw.edu.au/content/workshops_events/about_events.cfm?ss=2

- Pathology Special Interest Group (PSIG) in the scholarship of learning and teaching = meets on first Monday of each month at 3:30 pm in SG Room 11 prior to the Dept. academic staff meeting. All welcome (Gary Velan)

REFERENCES

- Brookfield, S. (1995). *Becoming a Critically Reflective Teacher*. Jossey-B, San Francisco.
- Boud, D., Keogh, R. & Walker, D. (1985). *Reflection: Turning Experience into Learning*. Croom Helm, London,ass, San Francisco.
- Kolb, D. and Fry, R. (1975). "Toward an applied theory of experiential learning", in C. Cooper (ed.) *Theory of Group Processes*, John Wiley and Sons Inc, New York.

RECOMMENDED READING

Berg, B.L. (1989). *Qualitative Research Methods for the Social Sciences*. Pearson International Edition (6th ed.). Allyn and Bacon; Boston.

This valuable book takes the prospective researcher right through the qualitative research process from A to Z with particularly good chapters on the benefits of qualitative research, the why, what and how of focus groups, and the process of content analysis.

Sinclair, S. (1997). *Making Doctors: An Institutional Apprenticeship*. Berg Publishers; Oxford, UK. (Available by inter-library loan from University of Sydney Medical Library).

A fascinating book; there is no doubt that Sinclair has produced a beautiful piece of research here. By attending a London medical school and shadowing students and new interns, this medically trained anthropologist has captured the key processes and transformations that occur in training young doctors. He debunks some long-held myths but provokes more questions than he answers. Recommended: the chapters on "The Dissecting Room", "Patients and Ward Rounds" and some scary insights into what students think of lectures and lecturers in "Knowledge: Writing, Sight and Self". Although this research is over ten years old and records student life in an old-style traditional curriculum, there is plenty here to interest, surprise and amuse.

Evaluation is "concerned with the effects of our teaching on our students' learning, and the ways we can change teaching so that it best brings about the sort of learning we value"

Ramsden, P. and A. Dodds (1989). *Improving teaching and courses: A guide to evaluation*. Melbourne, Centre for the Study of Higher Education, University of Melbourne. p 2.