

Linking research and teaching



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Warwick objectives



- becoming a world leader in teaching and research
- raising the University's national and international profile
- differentiating the University from its current and future competitors

Outline



- To what extent does research inform our teaching?
- What linkages might there be?
- What are the potential benefits and costs?
- How might linkages be improved?

Research and teaching



“to discover and to teach are two distinct functions; they are also distinct gifts, and are not commonly found united in the same person. He, too, who spends his day in dispensing his existing knowledge to all comers is unlikely to have either leisure or energy to acquire new!

Newman (1853) *The Idea of a University*

We read, scan, dig into sources, calculate, ponder, disentangle others' work and our own, try to put it together again to different effect; deconstruct, reconstruct, tear our hair over the intractability of the worlds ... that it is our business to try to grasp. This is a case for teaching *and* research.”

Westergard (1991)

Criticism



- “... the research universities have often failed, and continue to fail, their undergraduate populations. Thousands of students graduate without seeing the world-famous professors or tasting genuine research”
Carnegie Foundation for the Advancement of Teaching, 1998
- “.. The precise relationship of the link between teaching and learning seems not to have been addressed in any concerted way... there was very little systematic reflection within the University about just what was meant by the claimed interdependence of teaching and research.”
HEQC 1998 (re University of Exeter)

Research to date



Most empirical studies show little or no relationship, especially in:

- Natural sciences
- Research-led universities

Higher (but low) correlations in

- Social Sciences
- Colleges or liberal arts institutions

Hattie and Marsh

Disciplinary dimension



“Academics in English and History departments were the most likely to see their role in terms of integration of research, teaching and, in some cases, administration as well”

“The ideal science career was to continue in research throughout”

Henkel

Student voice -1



It's reassuring that you're being taught by people who are well respected in their field

Good that you can know really up to date stuff. It's also quite cool just seeing articles and stuff written by people in the department.

Student voice -2



The most interesting course I've done this year has been a guy who's writing a book and developing his theory and taking feedback from us, and you get that feeling that you're part of his developing theory.

Student voice -3



You could so obviously tell he knew what he was saying and he thought there was nothing complex about it whatsoever and it was so obvious to him and we're all sitting there going, I don't know, I don't get it...

Student voice -4



I feel that the lecturers who are very involved in research are a little bit carried away and they're less able to focus on the teaching side and ... they wander off. I mean it's very interesting but it's not something that you can use or discuss ...

Student voice -5



I don't think he teaches anything in (the dept), you don't see him anywhere near a lecture but at least people know about him, he's in the Times, the FT and the Economist, people know about the University because this amazing man is theoretically here, and it makes your degree worth more, I think.

Student voice -6



“Personally I’m not too bothered to be honest because I’m not really into (the subject), I’m here to get a degree, my motivation is to get a job ... But having said that, when I’m forced to do things I do enjoy it. ... when you’re ... doing everything on your own it’ll probably help you out a lot later on as well to do your research, find a topic and then find your data and stuff without getting it from the department, looking for places to start from ... it’s good to be forced to do something like that”.

Potential benefits



■ **Motivation**

Students report being inspired by experts in their field, who convey enthusiasm for the subject

■ **Active learning**

Students tend to learn most when they are actively involved in developing their knowledge

■ **Skills development**

The intellectual skills of critical analysis

Transferable skills: group work, time- and resource-management and data handling

Deep and surface learning



Deep

- making decisions about what is learned
- examining evidence carefully
- relating ideas in one subject to another
- learning for own sake

Surface

- prescribed learning
- learning by rote
- compartmentalised learning
- learning for assessment

Adoptive and adaptive learning

■ Adoptive

Knowledge and practice of:

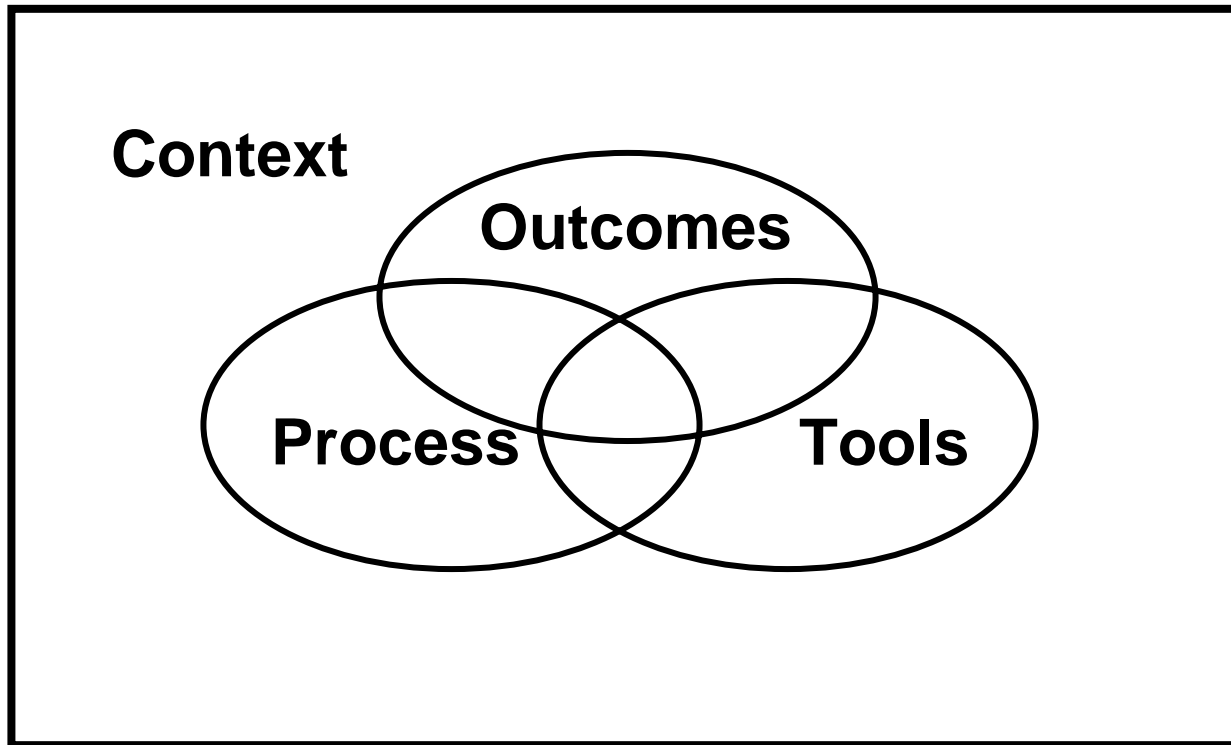
- ◆ *Facts, Rules, Laws*
- ◆ *Terminology, Language*
- ◆ *Techniques, Procedures*
- ◆ *Organisation and Structure*
- ◆ *Established principles and relationships*

■ Adaptive

Formation and generation of:

- ◆ *Personal meaning, interpretation*
- ◆ *Evaluative judgement*
- ◆ *Argument, justification*
- ◆ *Synthesis and conceptualisation*
- ◆ *Originality, creativity and innovation*

Research-Based Learning Elements



Key questions



- Are courses designed to integrate research both as content in the curriculum and as a learning process?
- How do students come into contact with the department's research?
- How do students learn research methods and develop research techniques?
- What opportunities are there for students to do their own research projects and self-directed work?
- Does research-based learning take place throughout all years of undergraduate degree programmes? If not, could this be further developed?

Some tricky aspects



- Bulk, breadth and coverage
- Basic grounding
- Specialised research
- Marking and supervising less structured work
- Student expectations: guidance and certainty
- Access to academic writing and tools

Practical links



1 Undergraduate Research Scholarship Scheme

Enables year 2 students to:

- Experience real research work
- Develop transferable skills such as project management and communication skills
- Enhance their research skills
- Work as a member of a research team
- Become aware of academic research and career options in this area

Practical links



- 2 Departmental projects
- 3 Scholarship of engagement project
- 4 Student evaluation project
- 5 IT and research capabilities

A Centre for Excellence



The Reinvention Centre for Undergraduate Education

- Department of Sociology - Warwick
- School for the Built Environment - Oxford Brookes

Director: Dr Mike Neary

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Reinvention focus



Undergraduate research central to undergraduate education

Focus on year 2 to:

- enhance students' skills of criticality and independent learning
- grow students' passion for and commitment to their subject
- enable students to become part of the research culture of the university

Reinvention activities



Student research enhanced through

- curricula redesign
- extra-curricula research opportunities
- research scholarships
- accreditation for research skills
- student exchanges
- joint ventures with community organisations

Institutional plumbing



- Is there a focus for R/T links?
- Are T and R strategies / committees linked?
- Are R/T links, inc promotion, rewarded?
- Does course approval and review monitor R/T?
- Is T impact of R bids considered?
- Are the effects of the links evaluated?