Teaching; informed and enriched by research

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Assumptions

- Both teaching and research are core activities of a university education.

- It is the link between teaching and research that distinguishes higher education from other forms of education.

- All activities in a university are informed by the most recent developments in knowledge and understanding.

- Tensions exist between "research-intensive" universities, "research-informed" universities and "teaching-intensive" universities, on a national and international basis, centred on the meaning of research and its consequences.

Definition

Frascati (OECD, 2002)

Researchers are:

"Professionals engaged in the conception and creation of new knowledge, products, processes, methods and systems, and in the management of the projects concerned".

i.e.
Not just as publications in journals, but a transfer of new knowledge to students, business and the wider community.
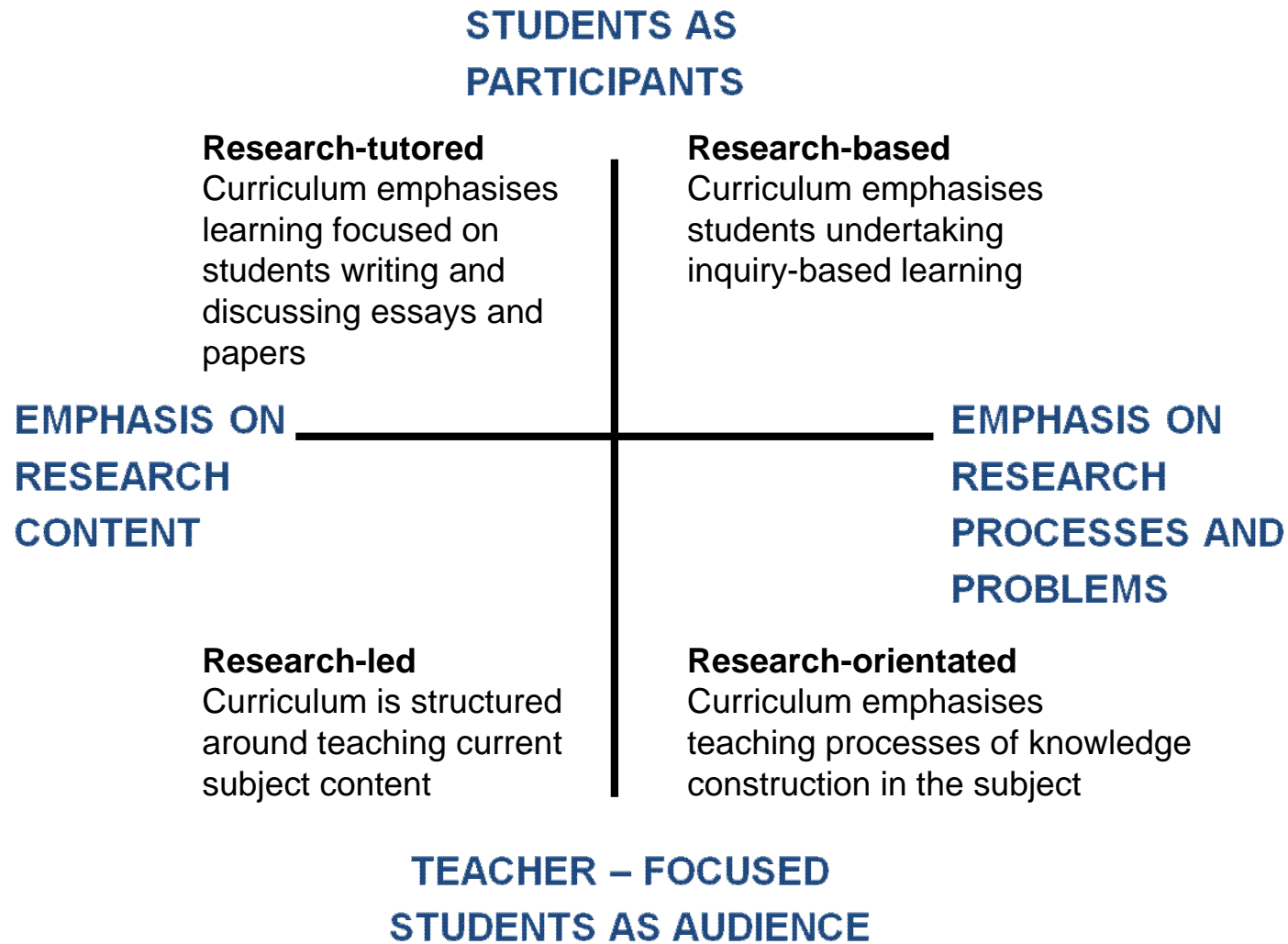
The Research Continuum

Activity of academic staff	How it underpins the curriculum
"Traditional" research resulting in publications in journals and the popular technical press. Generates new knowledge and understanding.	• Research processes and findings are used as the basis of lecture, seminar, tutorial and practical work. • Published work as reading material.
Work in and with research teams.	• Internships, projects and vacation appointments to learn how research is done.
Active participation in the work of professional or learned bodies.	• Student awareness, involvement and understanding of professional developments. • Personal development and guidance. • Published work as reading material. • Career opportunities.
Continuing personal development in support of professional practice. Lifelong learning.	• "Spin-off" teaching materials and practitioner feedback for student use.
Consultancy.	• Case-studies for class use, site visits and assessment purposes.
Advanced professional practice.	• Case-studies, such as the "design and build" approach used by engineers.
Research into enquiry-based learning, teaching and assessment.	• Advances curriculum design.

What does linking teaching and research mean?

- <u>Learning about the work of others:</u> Understanding the findings of research and how this knowledge impacts on our understanding of the subject.

- <u>Learning how to do research:</u> The process by which new knowledge is produced, such as the scientific method, surveys, etc.

- <u>Inquiry-based research:</u> How research problems are identified and addressed.

- <u>Pedagogic research:</u> Reflecting on the learning process.

- <u>Impact of research:</u> An awareness of the importance and consequences of research findings to the wider community, including business.

Curriculum design to link teaching and research (Healey, 2005)

STUDENTS AS PARTICIPANTS

Research-tutored
Curriculum emphasises learning focused on students writing and discussing essays and papers

Research-based
Curriculum emphasises students undertaking inquiry-based learning

EMPHASIS ON RESEARCH CONTENT

EMPHASIS ON RESEARCH PROCESSES AND PROBLEMS

Research-led
Curriculum is structured around teaching current subject content

Research-orientated
Curriculum emphasises teaching processes of knowledge construction in the subject

TEACHER – FOCUSED
STUDENTS AS AUDIENCE

What can a university do to strengthen the link between research and teaching?

- ❑ Make the link central to the mission of the university.
- ❑ Embed a culture of scholarship.
- ❑ Benchmark nationally and internationally.
- ❑ Fund staff development, to ensure that staff are up-to-date and active in their disciplines (e.g. Conference attendance).
- ❑ Personal research plans as a feature of annual review.
- ❑ Review promotion and reward criteria.
- ❑ Ensure the curriculum is informed by research with explicit use of references and examples.
- ❑ Review timetables; consider independent study weeks.
- ❑ Involve students in staff research.

Challenges

- International and national league tables.
- A publish or perish culture.
- Promotion prospects favour research.
- Funding constraints.
- Customer satisfaction; student surveys.
- Keep in touch with your students, not only by your graduate teaching assistants.
- Complacency and inertia (the "ostrich effect"!).