



## LEARNING THROUGH RESEARCH

This guide is based on the work completed by a group of seven Fellows in Teaching and Academic Development in 2014.

Their work provides an important insight on these two perspectives:

- Exploring the impact of research-teaching linkages on the Undergraduate student experience in UCD.
- Exploring the understandings and perceptions of the importance and relevance of research-teaching linkages amongst faculty.

### Different Approaches to Research-Teaching Links

The link between teaching and research in universities, particularly in those universities that are termed ‘research-intensive’ has been hotly debated worldwide for a number of years. While overarching phrases like ‘research-informed teaching’ are used quite frequently in high-level university strategies, there are considerable differences between how students learn from the research undertaken by academics, how students are taught practical research skills and how students learn to become researchers themselves. These different approaches can be defined as:

- ‘Research Enriched Teaching’ where faculty use examples and experiences from their own research to enhance their teaching;
- ‘Teaching of Research Skills’, where they teach students the fundamentals of research and
- ‘Engagement in Research’ where they supervise and support students undertaking research.

Faculty see these approaches as largely existing together in harmony as part of their overall educational remit with students. Students tend to make similar categorisations of learning about staff research, learning how to conduct research, and undertaking research in their own right. Students describe a general awareness of research in stage one to a much stronger focus in the penultimate or final years of some programmes when they engage in a work placement and/or a significant research project. Through work placements, students see how research impacts practice, whereas by engaging in research projects, students learn first-hand, about the challenges and rewards of doing research.

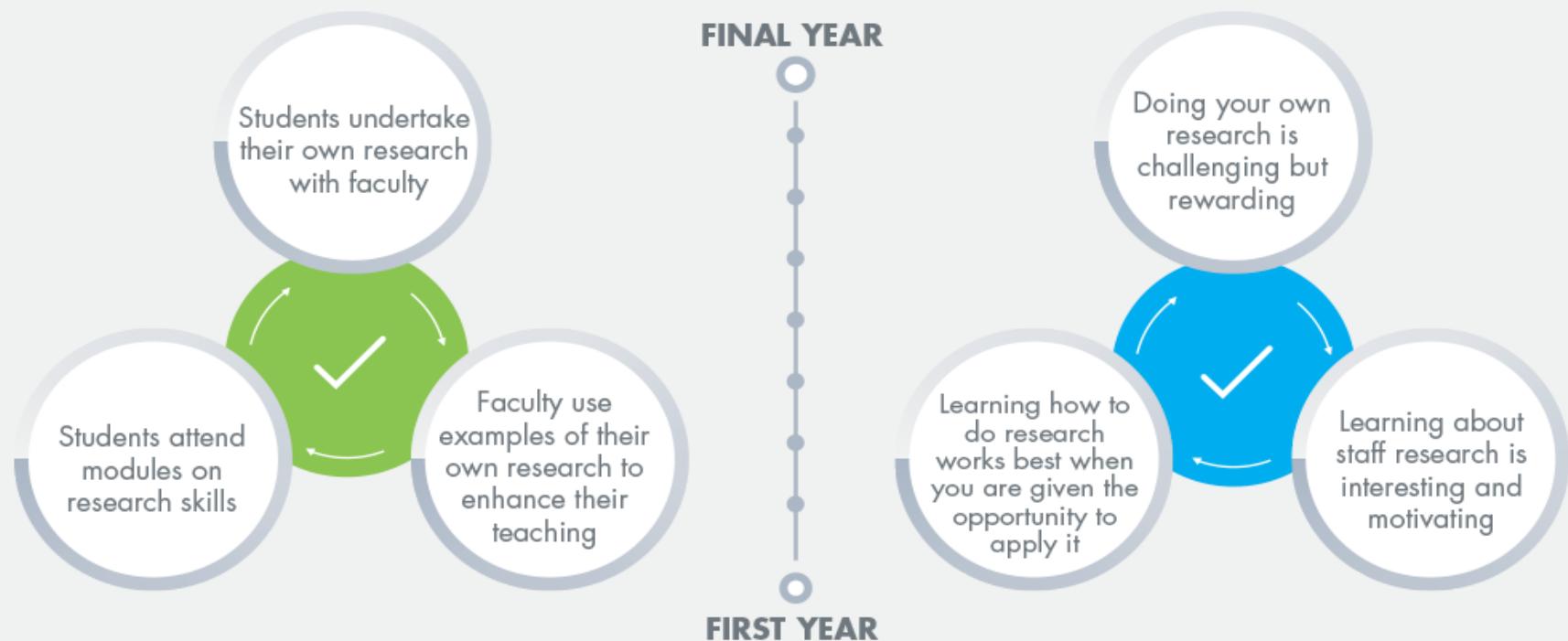
# FACULTY AND STUDENT PERSPECTIVES ON HOW AND WHEN RESEARCH HAPPENS IN THE CURRICULUM



**Faculty** perceive that different approaches to research-teaching linkages exist in relative harmony



**Students** perceive that they experience research in different ways throughout the undergraduate curriculum



## Student Views on Impact of Research-Teaching Links

Students see value in all exposure to research-teaching linkages but perceive some approaches as having more impact on their learning and as being of more value to them in their future careers. Perhaps not surprisingly, students who have the opportunity to carry out individual research projects (normally in the final year of their programme) indicate that this type of research experience has the highest value to them. The experience of completing a research project within a research team gives students the opportunity of being participants in a research community. In addition, those who partake in work-placements, usually in latter stages of a programme, describe how they can better appreciate the impact and value that research has on practice, and will have on their future careers. In relation to learning how to do research, students perceive that modules on developing research skills have the most impact on learning when one has the opportunity to apply these skills in an authentic context and in a timely manner.

In the work of the Fellows it was noted that students discussed how you can ‘be taught’ about things, but it is not until you have to apply them in a real context that you truly understand and appreciate them. Students really appreciate learning about staff research. This can take the form of a staff member speaking generally about his or her research in a level one module, to delivering a module on their research area in the latter stages of the programme.

## Developing Research Skills in the Undergraduate Curriculum

For an undergraduate programme, key research knowledge and skills should be identified and embedded using a spiral curriculum design. These can vary depending on the discipline. Students should be given opportunities to learn and practice these skills from an early stage - revisiting them as they move through the programme, with the aim of deepening their understanding.

# DEVELOPING RESEARCH SKILLS

## IN THE UNDERGRADUATE CURRICULUM

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- Write a poster/paper/proposal
  - Design and execute research project
  - Contribute to staff research
- Literature review/essay
  - Advanced skills through inquiry labs
  - Use staff research in enquiry/problem based learning
- Basic information literacy
  - Basic lab skills with inquiry element
  - Outlines of staff research interests
- Increasing depth and independence ↑

Examples of key knowledge/skills:



Engaging with  
the literature



Research design  
and methods



Awareness of  
current research