

BREAKTHROUGH MOMENTS AND FAILED EXPERIMENTS – THE STUDENTS’ VIEW OF RESEARCH LED EDUCATION AND WHAT THEY MEAN TO OUR INSTITUTIONS

Sam Backwell, Ellen Rykers, Lillian Smyth, Thomas Sloan, Federico Davila

Presenting Authors: Sam Backwell (sam.backwell@anu.edu.au), Ellen Rykers (ellen.rykers@anu.edu.au), Lillian Smyth (Lillian.smyth@anu.edu.au), Thomas Sloan (thomas.sloan@anu.edu.au), Federico Davila (Federico.davila@anu.edu.au)
Colleges of Science, Australian National University, Canberra ACT 0200, Australia

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ABSTRACT

THE ISSUE:

What learning behaviours and specific pedagogical strategies do students value most in learning to research?
Do undergraduate students value the opportunity to experience original research and to have an experiment fail?
This project is based on the premise that a university education includes research experience whatever career paths graduates intend to undertake. It examines specific practices that prompt breakthrough learning experiences in students as they engage in research.

THE APPROACH:

This will be a student panel discussion and presentation facilitated by Professor Aidan Byrne.

Research led education and providing research experiences for undergraduate students are longstanding hallmarks of ANU Science education. Willison and O'Regan's Research Skills Development Framework and Healey & Jenkins (2009) model of the nature of undergraduate research and enquiry have significant currency amongst staff and students in the Colleges of Science. This student panel will discuss their experiences of learning to research and present data on ANU undergraduate students understandings of research and views on Science education from across the disciplines. As the former Dean of the Colleges of Science, Professor Aidan Byrne has been an important leader of ANU Science education and will help provide context in facilitating the discussion.

During this session the panel will discuss their views on the value of experiencing a failed experiment and on what learning experiences lead to breakthrough moments. They will also present data capturing how a wide range of students across science disciplines at the ANU experience these processes and how it impacts on their decisions to pursue science, research or an academic career. Through this combination of qualitative discussion and quantitative analysis, we hope to give a snapshot of the ways in which students perceive and experience involvement in the research process and what impact this has on their studies and outcomes.

This study will be followed by a corresponding study of staff values and experiences. It aims to promote increased alignment of student and staff perceptions and behaviours as a means to improving tertiary learning experiences.

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