

Enhancing undergraduate engagement through research and inquiry

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Outline

- ⊗ Why engage undergraduates in research and inquiry?
- ⊗ My ALTC National Teaching Fellowship
- ⊗ Practical implications
- ⊗ How to move this undergraduate research agenda forward



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National documents

- ⊗ "Public funding should be directed only to those institutions that: encourage both students and staff to engage in critical enquiry...." (Bradley Review Report page 7)
- ⊗ "Self-fulfilment, personal development and the pursuit of knowledge as an end in itself; the provision of skills of critical analysis and independent thought to support full participation in a civil society; the preparation of leaders for diverse, global environments; and support for a highly productive and professional labour force should be key features of Australian higher education." (Transforming Australia's Higher Education System)

Integrating research and teaching to enhance student engagement

- ⊗ Positive impact on retention and satisfaction
- ⊗ Students learn what research is and how to do it
- ⊗ They develop a sense of professional identity
- ⊗ Increases in self confidence
- ⊗ Develops of advanced technical skills, problem solving, creative thinking and communication skills e. g. giving presentations
- ⊗ Develops independent work habits
- ⊗ Enhances teamwork and collaboration
- ⊗ Ability to deal with ambiguity and obstacles
- ⊗ Clarifies career goals



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Aim of my Fellowship

To enhance student engagement in learning through supporting the development in Australia of undergraduate research and inquiry



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Identifying national needs

- ⊗ Study tours
- ⊗ National documents
- ⊗ Undergraduate research
- ⊗ Key personnel



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Intended outcomes

- ⊗ Identify national needs
- ⊗ Enhance debates concerning engagement of undergraduate students in research and inquiry
- ⊗ Establish a set of readily available resources and protocols to bridge gaps between current and future practice
- ⊗ Disseminate these through a [website](#) and discussions
- ⊗ Provide the foundation for the establishment of a national centre for the integration of research, teaching and learning

Definition of undergraduate research and inquiry

[An] inquiry or investigation or a **research-based activity** conducted by an undergraduate student that makes an original intellectual or creative contribution to the discipline **and/or to understanding.** (following Beckman & Hensel, 2007)

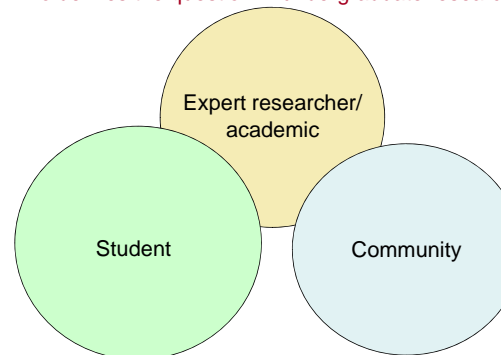


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Tensions in implementing undergraduate research and inquiry

Student, process centered	↔	Outcome, product centered
Student initiated	↔	Faculty initiated
Honors students	↔	All students
Curriculum based	↔	Co-curricular
Collaborative	↔	Individual
Original to student	↔	Original to discipline
Interdisciplinary	↔	Discipline based
Campus/community audience	↔	Professional audience

Who defines the question in undergraduate research?



Research in the curriculum can be carried out

1. Assignments and tutorials within specific subjects
2. Whole courses or programs, for example across year levels
3. At whole of degree level e.g. PBL, IBL



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What needs to change?

- ⊗ Course organisation structures: from individuals to course teams
- ⊗ Module flexibility
- ⊗ Vertical integration
- ⊗ Ideas about research and who is capable of doing it
- ⊗ Teaching spaces



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Concluding key issues

- ⊗ Importance of undergraduate research as a beginning preparation for research careers
- ⊗ "The path I am setting out...raises the expectations we have of our young people and their parents and of our great institutions. It asks them to be bolder and more ambitious in what can and should be achieved" (Hon Julia Gillard MP 4th March 2009)



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Brew, A., & Sachs, J. (Eds.). (2007). *Transforming a University: The scholarship of teaching and learning in practice*. Sydney: Sydney University Press.



Brew, A. (2006). *Research and Teaching: Beyond the Divide*. London: Palgrave Macmillan.



Jenkins, A, Breen, R., & Lindsay, R. & Brew, A. (2003). *Reshaping Teaching in Higher Education : Linking Teaching and Research*. London: Kogan Page.



Brew, A. (2001). *The nature of research: inquiry in academic contexts*. London, RoutledgeFalmer.