

Exploring connections between teaching, research and learning at Monash University

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Introduction and aim: There is extensive literature on the relationship between teaching and research and its importance in higher education (Brew 2010). Studies carried out on research productivity and teaching effectiveness have not been able to illustrate and quantify a connection between teaching and research (Hattie & Marsh, 1996). Yet the literature shows a strong rationale that research and teaching have a qualitative relationship with one influencing the other (Brew 2010). Research forms the discipline knowledge base of teaching and enhances teaching by introducing current topics and methodologies while teaching enhances research by help clarifying and placing in context research findings. Student feedback and questions can clarify and provide new research directions while sharing research findings with an appreciative audience has the potential to provide motivation for furthering one's research (Jenkins 2004). Consequently, the relationship between teaching and research is complex; it is disciplinary-based, university-contextual and connections between the two may take on a variety of forms. The study reported explores these connections within the MBBS program at Monash University with the objective of strengthening them to benefit student learning and teacher effectiveness.

Method: Second year MBBS students from Monash University's (i) Clayton (metropolitan), (ii) Gippsland (rural) and (iii) Sunway (overseas) campuses were administered a set questionnaire at the end of a scheduled class which sought information on their understanding of research, experiences in research and the impact of research on their learning. Academics teaching second year MBBS students from the three campuses were invited to participate in individual interviews which explored their perceptions of the teaching-research nexus and how their research and teaching have impacted on each other.

Data from student questionnaires were entered into an Excel spreadsheet and analysed using SPSS using standard methods while teacher interviews were transcribed, de-identified and analysed according to themes.

Results: In total 206 students participated, 128 metropolitan students, 51 rural students and 27 overseas students. In addition, four academics from the metropolitan and rural campuses participated in the study. Fifty-four percent of the students recruited were males with more than half of the students aged between 19-20 years. Across all cohorts the majority of students understood scientific research as investigation into a study of a topic, gathering of data and systematic experimental work. Students had varied perceptions of what research is and who should be conducting it. The majority of the students reported limited exposure to research but despite this limitation the few experiences of research had a positive impact on them such as in stimulating their interest to learn about a topic, developing communication skills, data presentation and analysis, working as team members and wanting to be a part of their teacher's research. The academics believed that their research and research in general provided the evidence base for their teaching and could be successfully used to engage their students in learning while recognising the positive impact their teaching had on their research.

Conclusion: Teaching and research can influence each other to benefit both the student's learning and the academic's effectiveness as a teacher.

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Jenkins, A. (2004) In: *A Guide to the Research Evidence on Teaching Research Relations*. York, Higher Education Academy.