

Research encounters: Seeding a research culture in first year

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Abstract

This project was designed to engage and enhance the learning of first year students of biomedical science and allied health by introducing research based learning into the curriculum of the foundation year program. The project was highly organised to accommodate the interdisciplinary cohort of approximately 550 students, but allowed and encouraged creativity, inquiry and autonomy on the part of the students.

The primary aim of the project was to demystify the university research culture for the students by allowing first-hand experience in the form of a 'research encounter'. The research encounters ranged from face-to-face interviews with academic researchers to designing a pilot study based on research questions within the faculty. Resources and support were readily available to help the students in

all aspects of the project. The students worked in groups to develop the assessment item in the form of a poster, which is presented in the final week to their peers.

The project was evaluated by pre- and post-encounter surveys that were analysed for significant differences in student perceptions. The interdisciplinary nature of the research poster presentations prepared students for future careers in allied health in which they will certainly work within interdisciplinary teams. Overall students developed a clearer understanding of the research culture within the university, made deeper connections with their peers, and clarified their career paths.

Keywords: research-based learning, first-year engagement, curriculum development, interdisciplinary health education.

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Introduction

There has been much literature on engaging first year students by integrating inquiry or research based learning into curriculum (Seymour et al. 2004). It is well known that when students engage in inquiry based or research based learning they use higher order thinking; take responsibility of their own learning; and become life-long learners.

Due to limitations in resources or settings for large student cohorts, health related research has become an activity reserved for advanced or postgraduate students. Undergraduate students, especially those in large first year cohorts, become further removed from the teaching-research nexus and the idea of practitioner researcher (Moore 2008).

In our experience, students in first year can become overwhelmed by course content and have little opportunity to explore their intrinsic vocational interests and develop an awareness of the research culture of the faculty; a culture in which faculty staff are formulating and responding to local and global health related questions. Intrinsic vocational orientation (students choosing a career path because of intrinsic interest) is largely undeveloped and can lead to student alienation and subsequent attrition (Case 2008).

We wanted to develop an assessment task that aroused student curiosity and exposed them to the research culture of the faculty, without the logistical problems of 500+ first year students partaking in research projects requiring supervision. We developed a project based on the idea of inquiry based learning, but modified it so students would personally encounter academic research. Rather than conduct practical or experimental research they would appraise research: a foundational skill for evidence based practice used widely by health practitioners (Moore 2008).

Our primary aims were to: demystify academic research; vertically integrate first year students with their school and faculty; and encourage research higher

degree studies as a component of student career expectations.

Innovation

Four schools of the health faculty **[AUTHOR: WHICH HEALTH FACULTY? PLEASE SPECIFY]** participated: dentistry and oral health; pharmacy; physiotherapy and exercise science; and medical science. The total number of students was 543. The project was embedded into a common course taken by all foundation year students and was allocated 10% of their assessment.

University **[AUTHOR: WHICH UNIVERSITY?]** ethics approval was granted and students gave formal consent to take part in the project.

From class lists, 110 groups of five students were allocated a type of 'research encounter' with a broad theme from which they were to develop a poster presentation. Types of encounters were:

- Interview with a research academic within their school
- Interview with research higher degree (RHD) student within their school
- Investigate research within their school and present it as magazine article in layman's terms
- 'Heroes in health'. Develop a biographical presentation of prominent researcher
- Design a pilot study on a specific health problem using faculty based research areas as a guide.

Students were supplied with numerous online resources and guidelines. From a faculty level, academics and postgraduate students were encouraged to volunteer

for interviews with the student groups that were allocated an interactive encounter. This allowed researchers and academics to meet and converse with a group of five first year students and discuss research questions, resources and environments. The students developed the interviews and subsequent posters themselves. For the interactive encounters, a part-time research assistant arranged appointments and venues for meetings between staff and students. There were 81 interviews in total.

Evaluation

This pilot project was evaluated using a short pre- and post-encounter questionnaire developed to determine student awareness of faculty research and higher degree programs. Responses (response rate 100%) were registered on mark sense cards based on a Likert scale (A = strongly agree to E = strongly disagree). Analysis of significant differences in student perceptions pre- and post-encounter were compared. Three post-encounter questions regarding student levels of engagement with peers and school were added to the final questionnaire.

Outcomes

After completing the project, all students (n=543) reported that they were more familiar with research questions within their disciplines and 73% (n=398) agreed they had a clearer understanding of what it means to do a higher degree by research ($p < 0.05$). From the final questionnaire, 68% (n=369) of students agreed that the project improved engagement with their school, 82% (n=448) agreed that the project improved engagement with their peers,

and 75% (n=405) agreed that the project improved their awareness of medical and allied health research.

What next?

The response was so positive from both staff and students that the project has been embedded into the health foundation year program. Further developments will include follow up studies on students who engage in research higher degree programs within the faculty in 2 years. More rigorous questionnaires will help determine more accurate data regarding career expectations and effects on student retention. Research encounters as described here is a curriculum innovation that can have multilayered impact on allied health education.

References

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