When researching and teaching meet…

THE UNIVERSITY OF ADELAIDE AUSTRALIA

Outcomes of explicit research skill development for undergraduates and masters by coursework students across 5 Australian universities.

This project is supported by an ALTC Competitive Grant.

One academic in our study *'…suddenly realised that students did not know where the material in her lectures came from, that they seemed to think it was just there for her to tell them about; they did not recognise the years of research in the field, the teacher's own research to enable her to present that knowledge, or that they themselves are engaged in a research process when they attempt to learn.'* [1]

1. Background

- Kerry O'Regan and John Willison developed the Research Skill Development (RSD) framework to guide academics' conceptualisations.[2]

- Eleanor Peirce and Mario Ricci demonstrated that the RSD, when applied to assessment matrices had a profound positive benefit for first year Human Biology students' research skills.[3,4]

- University of Adelaide provided a grant to pilot a protocol in six disciplines to address two research questions:

  Q1: What are the advantages and disadvantages of explicit RSD?

  Q2: What factors helped and hindered students research skill development?

2. Research Skill Development Study

- ALTC funded project addressed these 2 research questions, commenced June 2007, completed December, 2009.[5,6]

- Study involved University of Melbourne, Monash University, Macquarie University, University of South Australia and led by University of Adelaide, involving 29 academics in 20 disciplines.

- Utilised RSD-informed assessment matrices, which influenced strongly the learning environment.

- Pre- and post-questionnaires given to find student perceptions of research skill gains.

- Students interviewed one year after a course.

- Interviews with academics involved.

- Analysis of student RSD marks.

3. Outcomes of the study

- Statistically significant improvements in students perceptions of their research skills from pre to post questionnaires. [6,7] Academics agreed, and long-term RSD marks analysis confirmed.[4] Literature research skills, laboratory research skills and field research skills facilitated by the RSD.[4]

- Year-later interviews with students indicated that these skills were useful for subsequent study and especially for employment.[3]

- Process was highly effective in developing research skills, but numerous improvements suggested, problems identified by students.

- Academics highly positive, with 95% intending to maintain/increase use of RSD.

4. Implications

- Use of RSD may enable research skill development for the majority of students, and elicit a more positive attitude to learning in undergraduate and masters courses.

- Disciplines known to be using the RSD include Animal Science, Business, Computing, Dentistry and Oral Health, Education, Electrical Engineering, English, History, Media, Medical Science, Nursing, Psychology … and more joining.

- Extended framework, the RSD7, is currently being used at PhD level, suggesting potential coherent development from first year to PhD.

- Explicit research skill development in standard courses is a realisable way of enabling research and teaching to meet.

References

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[7] Willison, J., Schapper, J., and Teo, E. (2009). *Multiple methods of improvement of research skills in Business Ethics and Business Law.* Proceedings of the QATLHEBEC conference, February, 2009.