

ADDRESSING OBSTACLES TO SUCCESS : WHAT SCIENCE DO MIDWIVES AND NURSES REALLY NEED ? IMPLEMENTING CHANGE.

Presented by : Dr Gudrun Dannenfeldt and Dr Kevin Stewart

Acknowledgements :

- Wintec research team members : Jane Stewart, Jackie McHaffie, Kelly Gibson-van Marrewijk
- NZCER research partners : Dr Rosemary Hipkins, Dr Jane Gilbert
- Funding : Teaching and Learning Research Initiative (TLRI)

Research questions were based on the assumption that science is a potential barrier to overall success for midwifery and nursing students.

- Phase 1 – What aspects of science do newly graduated midwives and nurses really need to know?
- Phase 2 – How can science be taught more effectively to enable students to make more meaningful theory/practice links?

Introduction and insights from the literature:

The overall aim of our research project is to remove “the problem” of achievement in science for students in the nursing and midwifery programmes. Past students have reported science as difficult and time-consuming, and their achievement results reflected this. Science was seen as a barrier to overall course success (Gibson et al, 2005). Other research (Zepke, et al, 2006; Otrell-Cass et al, 2006) has focused on problems of retention and completion in the tertiary sector, thus locating the student or the tertiary context as the problem. Our research rests on a different proposition, arguing that the curriculum is at the root of “the problem”.

We are adjusting the science curriculum in an attempt to make the links between science and practice more explicit, so that students might see greater relevance for their learning, make richer links to prior experience and more explicitly link the science to their chosen careers.

Research design :

Phase 1 - Establishing theory/practice links: Focus groups with new graduates and educators in three locations provided rich stories of practice. The groups were asked: to analyse their key roles; and to suggest what science learnt or taught during the programmes contributed to these key roles. Participants’ stories were analysed and provided meta-themes to be used as a basis for implementing change.

Phase 2 – Implementing curriculum change: We are utilising a constructivist approach by adding stories and visuals to make the theory/practice links more explicit for students. Content reduction and a focus on outstanding questions provided more opportunities for students to interact with key ideas in the curriculum. Comparisons between the implementation of lectures, laboratories and tutorials in 2006 and 2007 have been made in self-reflection and peer review sessions. Although it will be difficult to quantify the impact, student evaluations will be sought. Actual test results, as well as patterns of use of online review activities are being analysed to compare both achievement and engagement before and after the changes were made.

Limitations of the research :

- Initial practice stories from focus groups related mainly to pathophysiology, so we needed to adapt our stories.
- Assessments need to better match the new curriculum approaches.
- Differences we may find in student results cannot necessarily be directly attributed to the changes we made, but a design with a “control” group was not seen as appropriate or practical in this context.

Conclusion :

The literature which supports the research draws from both science and nursing education. It explores practice-to-theory and theory-to-practice links, highlighting the largely tacit nature of these links (Chin et al, 2004). This literature suggests to us that for nursing and midwifery to remain a profession with a theoretical body of knowledge and practical skill foundation, radical changes will have to be made to the curriculum. It is the challenge for the future that we are seeking to address. Initial indications of success will be outlined during the presentation, and challenges we have encountered will also be discussed.