Addressing Obstacles to Success: Increasing student engagement with science

Presented by
Kelly Gibson-van Marrewijk
Jane Stewart
Jackie McHaffie
Acknowledgements

• Other Wintec Research Team Members:
  Dr Gudrun Dannenfeldt
  Dr Kevin Stewart
  Dr Margaret Duff (previously at Wintec)

• Research Partners:
  Dr. Rosemary Hipkins

• Funding from:
Format of Presentation

• What is the problem?
• Research Overview
• Phase Two
• What we did…..
• What we found out…..
• What difference did we make?
• Where to from here?
What is the problem?

Science courses
- Abstract
- Decontextualised

Midwifery / Nursing practice
- Applied science
- In context

Tacit links

Educators decide what science knowledge is necessary

Midwives / Nurses translate science's meaning in practice
Research Overview – Phase One (2006)

- Addressing Obstacles to Success
  - 2 year project

Phase One 2006

- Literature Review
- Focus groups with:
  - Midwifery & Nursing Clinical Educators
  - New Graduate Midwives & Nurses

- Development of Intervention for Phase 2
- Rich Contextual Maps of Midwifery & Nursing Practice in Action
Phase Two

Bachelor of Nursing Intervention Topic
• Cardiovascular system
• Renal system

Evaluation Tools

Staff
• Self Review
• Peer Review

Students
• SGID
• ‘Ticket out of class’
• Formative Tests
• Moodle Activity
• SETMAP

Cohort 21
• ‘Ticket out of Class’
• Focus Group
• SETMAP

Bachelor of Midwifery Intervention Topic
• Breastfeeding & Lactation Paper

Evaluation Tools

Staff
• Self Review
• Peer Review

Students
• SGID
• ‘Ticket out of class’
• Summative Essay
• Moodle Activity
What we did...

Interventions - Nursing & Midwifery

• Content reduction
• Stories
• Visual aids
• Laboratory sessions
• ‘Tickets out of Class’ (Angelo, 1993)
Establishing Relevance

- New Zealand race-walker Craig Barrett collapsed during the last kilometre of the 50 km walk in the 1998 Commonwealth Games. He became confused and disorientated and staggered aimlessly before being removed from the race and successfully treated.

(http://en.wikipedia.org/wiki/Craig_Barrett_(athlete))
Questions for students

- Craig had been drinking during the race to prevent dehydration, but was he drinking water or “sport drinks”?
- Is the difference important?
- Did he drink too much, or not enough? How would you be able to tell?
- What was the appropriate treatment?
What we found out....

• Positive feedback from students

• Mixed feedback from tutors
What difference did we make?

- Students
- Teaching staff
- Project team - Ripples
Where to from here?

Curriculum

Assessment

Pedagogy

Bernstein (2000)