Using case studies to teach mixed level and mixed background groups

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Case studies developed for BSc Technology
Course Background

• New course – started in 2002
• Interdisciplinary – engineering, materials, psychology, geography
• Overall course considers the role of technology in society
• 1st year module on ‘Disasters’ taught by case studies
Case study 1 requirements

• Part of Disasters module – ‘manmade’ disaster on Space Shuttle Challenger disaster

• Mixed student levels –
  • 1st year technology students
  • 2nd year civil and chemical engineering students
  • 4th year biomedical engineering students

• 1st year students on technology course

• 2nd and 4th year students taking an ethics module
Student Cohort

• Vary in academic background
  • Engineering students having more technical knowledge
  • Technology students having experience of previous case study on Twin Towers disaster

• Vary in motivation
  • Engineering students interested in ethics
  • Technology students interested in overview of event
Case study design

• Learning strategy to accommodate all students
• Mixed teaching structure – video clips, role play, mini-lectures, discussion groups
• Pre-case study session for 1st year students on group working
• Explicit statements to students on expected interactions
• Different learning outcomes for student groups
Student Perception - group working session

• ‘I found the session really useful and it was interesting to look at strategies used in group working’

• ‘I got to know the group better and we eventually worked better as a team’

• No, but we should have done to help organise our group’
Student Perception - mixed group / peer tutoring

• ‘It was very beneficial, it was good to mix with other years as well as other subjects

• ‘Yes, because some of them were 4th year students and had a broader background of information

• Not very well, the 4th years seemed to be on a completely different level to us’