

# Using case studies to teach mixed level and mixed background groups

C.L. Davis and E. Wilcock

School of Engineering  
University of Birmingham



# 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
- 1<sup>st</sup> 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 –
  - 1<sup>st</sup> year technology students
  - 2<sup>nd</sup> year civil and chemical engineering students
  - 4<sup>th</sup> year biomedical engineering students
- 1<sup>st</sup> year students on technology course
- 2<sup>nd</sup> and 4<sup>th</sup> 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 1<sup>st</sup> 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 4<sup>th</sup> year students and had a broader background of information*
- *Not very well, the 4<sup>th</sup> years seemed to be on a completely different level to us'*