

# Promoting Learner Autonomy in Engineering



# Learner Autonomy



## Characteristics of an Autonomous Learner:

- Critical reflection
- Self-awareness
- Taking responsibility for own learning
- Working creatively with complex situations

# Project Objectives



- To develop learner autonomy in engineering students
- To link individual critical review to their Personal Development Planning
- For students to work effectively in teams and independently to develop communication, presentation, creative and problem solving skills

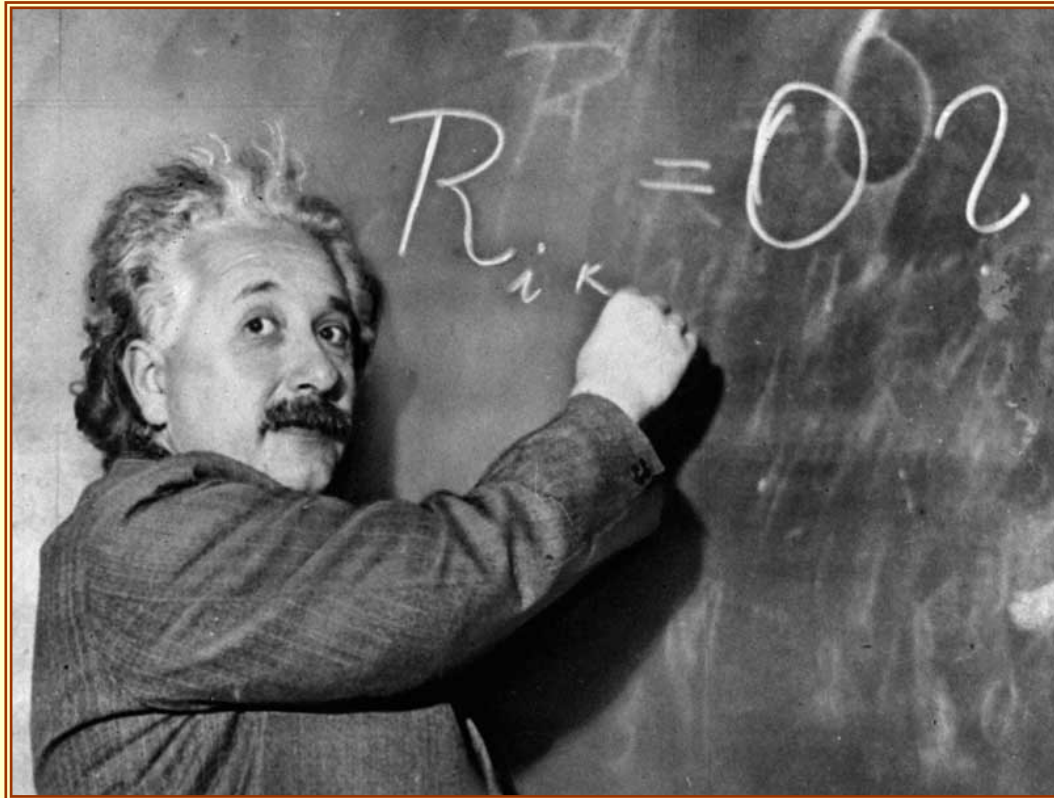
# “User as producer” approach main aims:



- To develop an enhanced staff approach when using video and media  
*Through consultation and workshop support  
(often with subject groups)*
- To enable the student learner to produce media more effectively and at a higher quality  
*Offering workshop training and drop in support*
- To provide an enhancement for the student learning experience
- To stimulate and energise learning

*"It is the supreme art of the teacher to awaken joy in creative expression and knowledge."*

*-- Albert Einstein*



Sheffield  
Hallam University

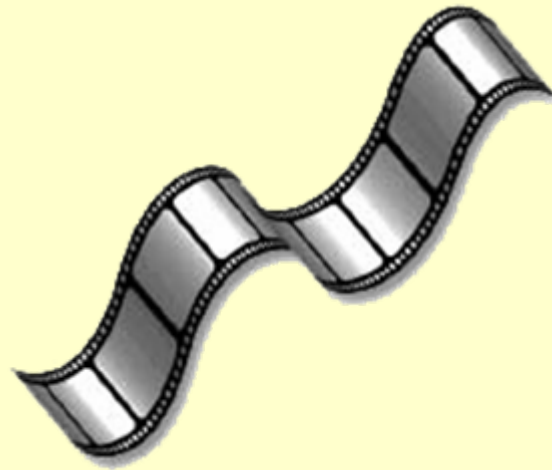
SHARPENS YOUR THINKING

# Projects with engineering students



1. First year -  
*Disaster management, engineering processes*
2. Third year - Case study:  
*Polymers and composites*

# Student voices – year 1





# Outcomes for First year students

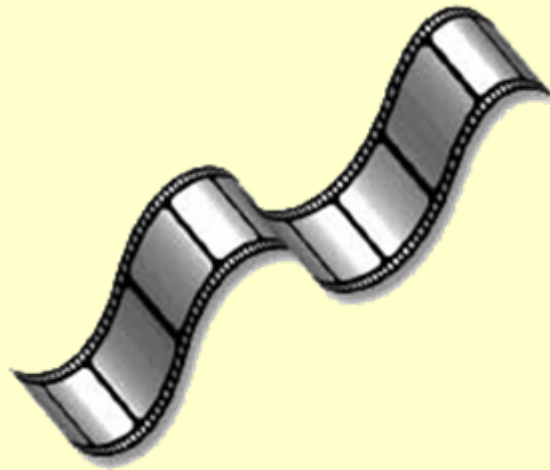
- Development of employability skills
  - Learner autonomy (research skills)
  - Team working and communication skills
  - Presentation skills (enhanced self confidence)
  - Project management skills
  - Media production & IT skills (enhanced motivation)
- Opportunities for developing staff
- Overall enhanced student performance
  - Previous year first time pass rate – 80%
  - Using new approach first time pass rate – 95%  
(5% failure didn't engage)

# Third year engineering students: *Studying polymers and composites*

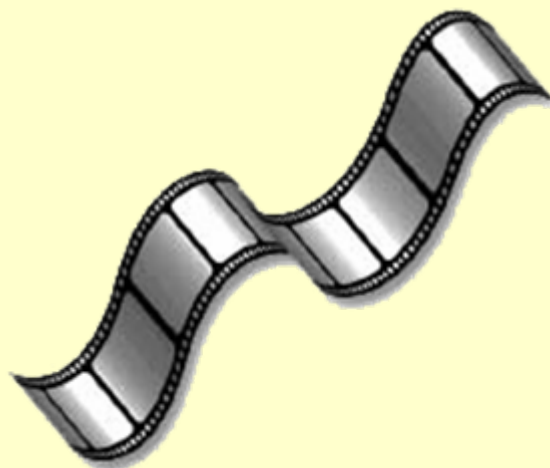


- Written case study replaced with media presentation format
- Students chose their topic
- Students chose the format
- Completed work handed in as media presentation

# *Project work examples*



# *Student voices*



# Overall outcomes



- The **methodology is flexible** and can be used in a range of subjects
- **Students quickly adapt** to the technology
- Students **enjoy** this kind project work which means:
- They become more **motivated** and:
- The overall **learning experience is enhanced**
- **Higher marks** are attained
- A **deeper level of learning** is achieved
- Provides a source **evidence of skills for interviews** (autonomous and group working)
- **Learner autonomy developed** (students manage their own learning and assessment)
- Students produce future media **learning resources**
- This approach is **not staff labour intensive**

# What next?



- Crossing engineering subjects with media subject areas  
i.e. engineering / computing students work with media students  
on media enriched project work
- Methodology works in multi subject areas  
i.e. Faculty of Health and Wellbeing are engaged in inter-  
professional learning CETL project work using video based role  
play
- On-line submission, Web 2.0, YouTube?