A Demonstration of Basic Use of eLearning to Manage Large Class Assessment

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Overview

- Classes in the second, third and fourth year of study
- Class sizes between 80 and 200
- Observations of benefits of eLearning and levels of adoption and suitability to be made for each group
- Effectiveness of eLearning utilisation and practical impact to be qualitatively assessed for each application

Final Year Students

- Used in 4 course codes, effectively 3 courses:
  - MECN4001: Gas dynamics and propulsion / MECN4004: Fluid dynamics
  - MECN4005: Design project
  - MECN4006: Research project
- Class size: 80 – 100 students
- Teaching assistants: None

MECN4005 / MECN4006

- Dissertation projects of 8 weeks each undertaken by final year students in SoMIAE
- eLearning tools used:
  - Assignments (file submission)
  - Announcements
- 2 periods of very high activity at each of the submission deadlines
- Previously the same function performed by email
- eLearning effectiveness: LOW
- Practical impact: HIGH

MECN4001 / MECN4004

- eLearning used in the context of the training students receive in Computational Fluid Dynamics
- eLearning tools used:
  - Assignments
  - Announcements
  - Group manager
  - Discussions
- Principally used to manage groups and distribute project and project-related information as well as past papers and solutions

MECN4001 / MECN4004

- Students tend not to use the discussion tool since they prefer to have conversations in person. Software licence limits them to use in the School's dedicated PC pool and so they tend to work at each others' machines
- Due to the practical nature of the assistance students require they typically consult in person or by email
- eLearning effectiveness: MODERATE
- Practical impact: LOW

Third Year Students

- Used in the third year laboratory courses (MECN3003, MECN3006, MECN3007)
- Class size: 155 (37, 21, 97 in 2011)
- Teaching assistants: 3
- eLearning tools used:
  - Assignments (submissions, SafeAssign*)
  - Announcements
  - Group manager
  - Learning modules and web links
  - Grade book
  - Discussions

MECN3003 / MECN3006 / MECN3007

- Submissions used as deterrent for plagiarism, a significant problem in the course
- Students are reliant on grade book for updates of marks
- Distribution of support materials such as web links improves student learning
- Decentralised mark administration saves time
- eLearning effectiveness: MODERATE
- Practical impact: MODERATE

Second Year Students

- Introductory course on computer programming for engineering (MECN2003)
- Class size: 200
- Teaching assistants: 10
- eLearning tools used:
  - Assignments
  - Announcements
  - Group manager
  - Learning modules
  - Grade book
  - Discussions

MECN2003

- Distribute lecture presentations after lecture is given to allow students to review and reinforce
- Distribute tutorials online and release solutions after tutorial submission time
- Online submission essential for submission of programs
- Decentralised mark administration essential

MECN2003

- Students are reliant on grade book for updates of marks and monitoring of unmarked items
- Exam run using online system as well:
  - Standardised materials for exam released only shortly before exam
  - Students submit exam program via eLearning
  - Server congestion and java tool problems an issue
  - Exam format would be impossible without eLearning tools

MECN2003

- Tutorials:
  - Due to the large class size and limited provided computers (60) tutorials run in 3 phases:
    - Foundation lecture – voluntary, intended to complement / supplement lecture material
    - Foundation tutorial – day's tutorial for students present at foundation lectre
    - General tutorial
  - Parallel session for students not attending foundation lecture

MECN2003

- Use of online tutorial tools being explored but implementation delayed until capability of new system ascertained
- eLearning effectiveness: MODERATE to HIGH
- Practical impact: HIGH

General Observations

- Lack of casual exposure to computers and the associated interface logic amongst disadvantaged students as well as limited connectivity generally inhibits uptake of eLearning tools by many
- Decentralisation of course administration by eLearning tools and suitable teaching assistants greatly diminishes administrative loads

General Observations

- University's new policy on personal computing expected to have large impact on current usage and allow use of eLearning in lectures and use of more advanced tools
- Students will not use eLearning tools at a high level until they are comfortable with interface
- eLearning effectiveness improves as use in a particular context matures