Flipping a large undergraduate statistics module using an interactive digital textbook

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Statistics and Probability I

- Compulsory Year 2 module on all large programmes
- 300 – 500 students
- Delivered using flipped classroom approach
  - Asynchronous materials - Online learning on Möbius – in a form of the digital textbook
  - 2 face-to-face hours of active learning sessions a week
    - Odd weeks – Poll Everywhere sessions
    - Even weeks – R computer sessions
  - 2 face-to-face hours of supported study a week

Poll Everywhere sessions

- 2-hour session
- First 4 or 5 questions to recap theory
- Students work through scaffolded examples
- More complex examples also discussed
- Feedback after every Poll Everywhere question

Computer sessions

- 2-hour session in a PC room
- Students work through R tutorial sheet independently
- R videos explaining commands and code in R
- More complex examples also discussed
- Supported by teaching assistants

Supported study sessions

- 2-hour session every week
- Optional, in a drop-in style
- Students can study, discuss with their peers and ask any questions
- Supported by teaching assistants

Assessment strategy

- Two online class tests on Möbius (each 25%)
  - Questions in the same style as quizzes in online learning
  - Assess mainly basic concepts
  - Assess R
- Final written exam (50%)
  - Assesses mainly higher-order skills

Student feedback

- Positive
- The majority of students are satisfied with this delivery approach.

Thank you for your attention.

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Deadline for submitting an abstract: 7th July 2025
Deadline for early bird registration: 31st July 2025
Final deadline for registration: 29th August 2025