

Encouraging speech in online small-group Maths problem-solving sessions: taking inspiration from individual sessions.

Abi Kirk



Design, run and evaluate online small-group Maths problem-solving sessions for students on M337 Complex Analysis.

Design informed by data gathered from Maths tutors on what they think encourages speech in individual sessions, and why. Gathered through survey and some session logs.

Rationale:

- Recent eSTEEeM projects suggest verbal interaction by students in online sessions is rare.
- Anecdotally it seems speech is more common in individual sessions, so their nature could inform the design of group sessions encouraging speech.
- Problem-solving sessions are chosen as it's felt students may naturally be more disposed to speak in these than in standard group tutorials.
- The M337 module team have agreed to the sessions being run on M337.

Evaluation:

- Formative evaluation of small pilot using feedback from students and observers to inform adjustments to design.
- Summative evaluation of main series of sessions, using feedback on perceived effectiveness.
- Analysis of verbal communication in problem-solving sessions, using framework based on: proportion of time tutor/students are speaking; proportion of students who speak; types of questions and statement made.

Anticipated outcomes:

- Description of session design
- Conclusions on effectiveness of design
- Conclusions on how well design encourages speech.

If design does prove effective, potential impacts are:

- Further problem-solving sessions on other modules
- Other tutors incorporating features of the design into their own practice
- Findings may eventually translate into larger group content-driven tutorials with more student speech.