

Learning & Teaching Enhancement Programme

Case study

As a way of capturing the detail and impact of your Learning & Teaching Enhancement Project, please complete the questions below, which align with the QAA Scotland reporting template. *Please answer all questions in 200 words or fewer.* Case studies may be published on the University's website and elements may be used in reports for QAA Scotland. Project teams may be asked to contribute a Blog or Podcast to help to share project activities and outcomes. Any questions, please contact cad@abdn.ac.uk.

Creating opportunities for group work to foster a sense of community in undergraduate studies.

Jean-Baptiste Gramain, and six undergraduate student members of the Student-led Maths Education Group (SMEG).

Context

Many students in undergraduate mathematics courses suffer from anxiety, sometimes stemming from the discipline itself, and struggle to interact with staff members and fellow students. This can in turn lead to further isolation, and give students the impression they are the only ones finding courses difficult while, in reality, many find themselves in the same situation. This is particularly prevalent in early years, when students need to not only establish new social groups, but also to adapt to new methods of teaching and learning which are too often intimidating.

The aim of the project was to use interventions by some of our own undergraduates (the SMEG-Heads, i.e. members of the Student-led Maths Education Group) to help their fellow students talk to each other and build confidence in their mathematical abilities. These interventions were to be designed by the SMEG-Heads themselves to serve a dual purpose:

- By using their own experiences as students, SMEG-Heads would be able to design more authentic and meaningful activities.
- By working together to improve the provision of mathematics at the University, SMEG-Heads would develop their own confidence and sense of belonging.

Description of activity

Working together, the six SMEG-Heads designed some group activities to help Level 1 students work on exercise sheets for the course MA1511 – Set Theory. They also designed two questionnaires, to be completed by students, to assess their confidence levels, and to gauge the impact and effectiveness of the activities they designed.

For two weeks, each of the three tutorial sessions for MA1511 was then run by SMEG-Heads, according to their plans.

Their strategy for running tutorials differently involved “simple” ideas such as moving tables around to promote discussions amongst students, but also the use of several prompts to engage students with the material in an unusual way and get them to work less passively on exercises.

Afterwards, SMEG-Heads analysed the responses they received from students, and presented their work at the Annual Academic Development Symposium via a mini-presentation and a poster(which won the popular vote in the poster competition). Together with JB Gramain, they also presented the project at the STEP conference in Glasgow in May.

Evaluation and impact

The impact of the activities designed and run by SMEG-Heads was evaluated by SMEG-Heads themselves through the questionnaires they wrote. Students really enjoyed the way tutorials were run, and how engaging they were. They felt much more confident about asking questions, and about talking with their peers. Most students felt much more comfortable asking questions to the SMEG-Heads than they would to regular staff.

The impact of the project on SMEG-Heads themselves was monitored by JB Gramain via two questionnaires (one before and one after the project), and an open conversation. From these, it is clear how impactful the whole experience was on SMEG-Heads. Throughout the project, they developed a multitude of skills, in particular group-work and communication skills (written, oral, expository). They enjoyed and embraced the challenge and opportunity to be involved in pedagogical activities, and to be trusted to help address issues they identified, in ways they themselves devised. Through their work together, SMEG-Heads experienced the kind of confidence and sense of community that they were trying to create for others, and were massively rewarded by the experiences at the Academic Development Symposium and STEP Conference.

Lessons learned and next steps

The main lessons go in two directions.

- First, SMEG-Heads have demonstrated that Maths tutorials at the University of Aberdeen can be improved using relatively simple changes which have a significant impact on the experience of students, their engagement, their understanding, and their sense of belonging. This will have to be implemented across the board in our courses, but also has much wider implications. Their results can probably extend to other universities, and to other disciplines.

- The project also showed the value in working with students as partners, and how much can be achieved by involving students in pedagogical activities. The experience was educational, rewarding and transforming for the students involved, and beneficial for the larger student community.

If nothing else, the project has confirmed the value of initiatives such as SMEG, which will therefore continue in future years. While it would be tempting to think of the next SMEG activities, the experience also shows that SMEG-Heads themselves should decide what they want to do, and that projects originating from students themselves are more likely to be successful. Staff can contribute by creating opportunities, supporting students (including financially) and giving them agency.

References

Please provide links to any relevant websites or further information about the activity in this section.