Student Transitions: Example of transitions practice

Title: **Learning to Learn Mathematics: Enhanced Academic Induction in Maths, University of Edinburgh**

Transition(s) the practice supports: In

Abstract: The School of Mathematics (University of Edinburgh), in collaboration with the Student Experience Project and the Institute for Academic Development, ran an Enhanced Academic Induction Programme for new undergraduate students in September 2014. The programme aimed to help students effectively transition to studying Mathematics at university through group activities.

Description: This Enhanced Academic Induction was launched in Induction Week, September 2014. It was a collaborative pilot designed and delivered by Pamela Docherty (Student Learning Advisor, School of Mathematics), Abby Shovlin (Student Experience Project's Academic Induction Coordinator) and Jenna Mann (Study Development Advisor in the Institute for Academic Development). There are various transitional issues for first year Maths students. The biggest challenge for new Maths students is how they are now expected to learn Maths at university. Moreover, students coming from school may not be accustomed to viewing mistakes as productive forms of learning. In addition, there is a culture of peer working and learning within the School of Mathematics that students are expected to participate in. In previous cohorts, it has been difficult to engage students in this activity.

In order to proactively tackle these issues, the team designed an induction pilot that aimed to enhance the traditional model of the School welcome talk by offering students an opportunity to interact with each other, ask questions and participate in icebreakers and subject-specific group challenges. The pilot had three goals:

- To demonstrate to students the main differences between teaching and learning of Maths at school and Maths at university and equip them with strategies to manage this transition
- To build community in the undergraduate programme by offering a PALS (peer assisted learning) taster session, giving them an opportunity to meet and put questions to higher year students
- To develop flexibility and resilience within students as learners by introducing them to growth mindsets

and learning through making mistakes (based on work by Carole Dweck and Jo Boaler)

The team designed a subject-specific, activity based academic induction. Students were randomly allocated to a group that then moved through five task stations: study skills and effective strategies (focusing on Dweck's mindset theory and learning from failures), communication (group working task), reading and writing mathematics, talking points (group listening and working skills) and a Maths PALS taster session.

At the end of the session all students filled in a combined feedback and feedforward card. The feedback section asked students to evaluate the induction: on how useful it was to them, whether it was enjoyable and if they got to know their peers. The feedfoward section asked students to note down the strategies that they were going to use to help them in their future studies of Maths. These feedforward cards were later revisited in group review meetings midway through the first semester, where students were asked to reflect on their development as mathematicians thus far.

From the feedback, 87% of students agreed or completely agreed that the induction was useful to them as new Maths students. Students commented positively on the study skills station saying that "it helped me understand that problems are part of learning". 88% of students agreed or completely agreed that the induction was enjoyable, with specific comments on the activities being "interesting and varied". 89% of students agreed or completely agreed that the session enabled them to get to know their peers, with students commenting on how "it was great to make friends so early in the year".

This was an extremely successful pilot project that will now be incorporated into the transition practice of the School of Mathematics.

Contact details: Abby Shovlin, Academic Induction Coordinator, abby.shovlin@ed.ac.uk