

What the flip? Inverting the foundation maths classroom

There is an ongoing debate about the most effective ways to integrate technology into HE learning environments, with flipped learning rapidly becoming a common option. This presentation explains how I have taken a traditionally-taught foundation-level maths module and inverted it to create a flipped classroom with a difference. Foundation students in the Department for Lifelong Learning at Sheffield University are predominantly mature students with disrupted studies, many of whom suffer from maths anxiety. Many also have families or otherwise disrupted lives. Flipped learning provides the flexibility these students need. In 2016/17, I used a unique model to flip my maths module, offering a safety-net approach by adding an interactive lecture to the usual structure of online material followed by tutorials. All stages of learning within my flipped model include opportunities for anonymous formative assessment designed to reduce maths anxiety. A range of creative technologies are used, including Plickers, Numbas, and Padlet. In this presentation, I will discuss the ways in which I have implemented the flip. I will also discuss the students' feedback about this new module design, and briefly consider this year's exam results compared to those of previous years. The results so far have been extremely positive: the percentage of fails has decreased significantly, and the number of good passes has increased. Flipping maths has enhanced the student experience, as well as impacting positively on summative outcomes by reducing maths anxiety.

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