

Working together: the positive effects of introducing formal teams in a first year Engineering degree

What did/do you do?

The School of Mechanical and Systems Engineering introduced a model of team working based on a scheme which had previously proved effective in increasing retention at another institution.

Who is involved?

Thomas Joyce and Clare Hopkins were the academics involved, and the students were studying first year Mechanical Engineering

How do you do it?

Students were allocated into Engineering Teams of five, comprised so that there was a range of previous academic Performances. In addition, and as far as possible, ex-foundation year and overseas students were distributed throughout the Engineering Teams. Great care was taken to ensure that females, who represented a minority group within the cohort (8%), were in a Team which contained another female. In preparation for working in Engineering Teams all students took part in a team building exercise during Induction Week which was aimed at encouraging team participation and communication. This exercise required them to build a Lego construction. Only part of the Team was allowed to see the model, the test of their team skills being their ability to communicate and follow instructions accurately. A tutor was allocated to each Engineering Team with the remit of meeting with them on an approximately fortnightly basis. The teams were encouraged to sit together during lectures and to work together on exercises given by the lecturer. Formal project work, assigned within two Stage 1 modules, was to be completed as a team and students were encouraged to be independent in scheduling meetings and allocating the necessary work between Team members.

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Teaching and Learning Case Study

2014/15

Tom Joyce

Mechanical & Systems Engineering (Bioengineering)

Coherent Curriculum themes:

- Student induction

Other keywords:

Progression, Peer feedback, Peer learning, Study skills, Retention, Attendance, Student induction, Groupwork

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Why do you do it?

In response to concerns that students enrolled in engineering courses in the UK and internationally have a higher than average rate of non-progression from Stage 1 to Stage 2. Introducing Engineering Teams during Stage 1 seemed most appropriate because, as Tinto (2006) writes of efforts to increase students' sense of integration, 'at no point does it matter more than during the first year of college when student attachments are so tenuous and the pull of the institution so weak'. Moreover (and pragmatically) the continuation rates were lowest between Stage 1 and Stage 2.

Does it work?

Analysis of statistical data relating to progression from Stage 1 to Stage 2 for this cohort of students revealed an increased number of students continuing into Stage 2, from an average of 82.0% over the academic years 2005/06 to 2008/09, to 92.5% for the academic year 2009/10.

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