

## **CETL-MSOR Conference 2015**

### **Chetna Patel: Maths diagnostic testing and beyond: Five years on**

In 2009 the University of Sheffield, developed and delivered a diagnostic instrument by the Maths and Statistics Help Centre for the first time to the Faculty of Engineering's new intake. This was in place of the individual departments administering processes for assessing students' mathematical ability at the start of the programme. The advantage of our approach was consistency across all the departments in the faculty as well as secondary benefits of involving both students and first year tutors in the maths and statistics support available centrally from the centre.

Five year on, the approach is revisited, evaluated and presented in this paper. The paper will discuss and evaluate the approach; firstly by testing the reliability of the diagnostic instrument as a tool for providing a proper appreciation of the student's mathematical standing and also examines its impact on engaging students in order to allow for a meaningful connection with their learning of maths.

The need to encourage students to reflect on which mathematical topics they may need to reinforce quickly and to give them proper direction on how to go about this is well understood. There is also a need from the departments to understand the needs of the whole cohort as well as early identification of individuals who may need extra support so that the students are able to work within the department's curriculum. This identification process is not straightforward since many students will exhibit the same symptoms but actual prescription to address the symptoms requires correct diagnosis and not simple identification.

The students sat an online basic maths diagnostic test made up of 40 questions decided upon with consultation with the Faculty's academics. Students are expected to score high, above 70-75%, the results are used to produce learning programmes for the individual students some of whom are strongly recommended to attend workshops and to seek support to address any weak areas of maths.

This paper reflects on our approach for encouraging student engagement through the diagnostic tests resulting centralised support. Analysis of the diagnostic test and related module results shows that overall the idea and the results have been beneficial for the students who engaged with the diagnostic test and support. When compared to the students who did not engage with the support, these students have them in the first year maths module.