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The effect of an online adaptive learning maths tool on Access to Science & Engineering students

Day 1 – Parallel III (16.30-17.00)

This year (2013/14) at the Maths Support Centre (MSC) at UCD we piloted an online adaptive learning platform with Access to Science and Engineering students (n=30). These mature (& non-traditional) students were also offered a suite of extra academic supports in the MSC including 9 hours of pre-course foundational mathematics and late night openings on Monday and Wednesday nights (to coincide with their lecture slots). The students were initially interviewed and given a diagnostic test to examine their basic algebraic, arithmetic and statistical skills including mental math and calculator work. The students were then given 40 days access to the maths learning and e-assessment platform RealizeIT (developed here in Dublin). The students were then given a post-test (similar to the pre-test they had taken 40 days earlier). The students' performance on these pre and post tests as well as their qualitative feedback on the online support tool will be discussed here. In the coming academic year of 2014/2015 this pilot will be extended to include both traditional and non-traditional students at UCD including:

- (i) 1st Science students on an Introduction to Mathematics Level 0 module (n=92),
- (ii) Higher Education Access Route (HEAR) students, (n=80),
- (iii) Disability Access Route to Education (DARE) students, (n=10)
- (iv) Mature Students (any student not included in the above groups who is over 23 years of age on January 1st of their year of University entry), (n=39)
- (v) International Students (typically from China and the Middle East), (n=15), as well as the
- (vi) Access to Science & Engineering cohort again (n=35).

These student cohorts will include students from 8 colleges and 12 distinct degree programmes and it is envisaged that we will examine (a) the differences with how students engage with the online tool both outside of and inside the "classroom" as well as (b) extending the strength of the adaptive tool as a remediating factor. This study will incorporate a larger and statistically more significant sample (N=260 (approx.)).