



What is clear (for example, from the recent Diploma fiasco) is the evident danger of trying to please everyone, and hence of devising a scheme whose complexity ultimately leads to painful and expensive failure.

So, rather than beginning by focusing on the ‘gap’ to be ‘bridged’, **we** begin *by looking at the ‘complement’* of this set: namely those who could be catered for by some version of what is currently in place. Our comments focus mostly on ‘academic’ courses post-16 – by which we mean *any* ‘general purpose’ mathematics programme such as GCSE or A level (as opposed to ‘maths embedded in vocational courses’).

*Given the eventual scale of the proposed changes it is essential to err initially on the side of caution.* Any realistic proposal must take into account the shortage of suitably qualified mathematics teachers, and the time scale required if one is to pilot and develop a new structure which presumes a significantly larger number of mathematics teachers at 16-19.

### **The details**

We start by observing that much of the current ‘gap’ between GCSE and AS level is of our own making. For example,

we incentivise schools to enter large numbers of students for GCSE at ‘Foundation tier’ simply to ‘play safe’ – even though we know this guarantees that they have effectively *no chance of progressing* to AS/

moves risk making this an anti-educational 'tick-box' exercise, with strong pressure on schools and colleges to encourage

We therefore postpone comment on the middle 20%, in order to consider a simpler approach for the top 25-30%. Here the goal should be to direct *as many as possible* of those who are aiming at university, and who need some 'academic' Mathematics, into taking *something like* the current AS level. The recent growth in entries for AS level Mathematics suggests that we might consider a structure which allows around 25% of the cohort (150-180 000 students) to take something like the current AS – provided that more students view AS-level maths *as a (one or) two-year programme*.

If this