

Michael Gove MP
Shadow Secretary of State for Children, Schools
& Families
House of Commons
London
SW1A 0AA

19 April 2010

Dear Mr Gove,

The Sir Richard Sykes Report

I write on behalf of the Advisory Committee on Mathematics Education (ACME) in response to the publication of the *Sir Richard Sykes Report* in order to provide some commentary on elements of the report which are particularly relevant to mathematics education.

ACME is pleased to emphasise the following parts of the report, many of which reflect its own recent policy positions. In discussing current issues in education it is important to consider the environment within which the examinations system has to operate, in order to avoid treating the symptoms rather than the cause. A major driver of the issues identified is the high-stakes nature of testing and the pressures on schools to meet targets, and it is these areas that must be tackled first.

1. *The excessive use of 'high stakes' examinations means that taught curricula narrow to that which can be easily measured in an examination. The principal driver for external testing is now the school accountability system rather than the benefit of pupils.*

ACME has argued for some time that this is the case across all levels; it is particularly noticeable with the end of Key Stage 2 tests in mathematics, which we believe do not currently serve the educational needs of the individual learner.

2. *The measure of 5 A*-C grades measures schools on quantity not quality, and incentivises getting pupils across the C-grade threshold rather than any further.*

There is growing anecdotal evidence that this particular accountability measure is contributing to the incidence of early and multiple entry in GCSE mathematics, which is of particular concern to ACME. It is driven by the pressure on schools to secure a passing grade for as many as possible – to the detriment of their mathematical understanding and ongoing education.

3. *The A* grade at A-level will only have a marginal impact as A-level syllabi do not necessarily promote the qualities and knowledge required by some university courses.*

ACME believes that the A* grade at A-level is essentially meaningless for mathematics, given that it will inevitably reward greater accuracy rather than depth of understanding. ACME favours the retention and further development of the Advanced Extension Award (AEA) in mathematics to challenge and inspire the most able learners.

4. *Subject experts in universities should be involved in determining the nature and content of examinations; awarding bodies should publish details of whom they have worked with or consulted on their qualification syllabuses and examinations – panels of experts are often anonymous at present and greater transparency is needed.*

ACME's work with Ofqual and QCDA has been hindered on several occasions by a lack of transparency, particularly in relation to the names of those that advice has been sought from. We share the view that there needs to be a greater role for stakeholders – not just universities, but employers, learned societies and expert communities – in informing the content of curricula. In addition, we believe that all correspondence and the sourcing of advice by QCDA and Ofqual should be published, without delay, so that the processes behind decision-making are made fully transparent.

5. *The structure, assessment and content of A-levels have been changed without regard to the demands of the relevant subject – driven by the notion of 'equivalence'.*

A blanket approach to regulation and curriculum development has a disproportionate effect on mathematics. To treat the teaching, learning and assessment requirements of each subject as the same ignores the distinctive differences that exist across the full spectrum of subjects.

6. *Pedagogy rather than content dominates the national curriculum, with changes being made with unnecessary frequency; schools should be given greater discretion over how to teach and given the room and freedom to teach beyond the curriculum.*

It is hard to separate the content of a national curriculum from the nature of mathematical knowledge and, hence, how it is taught. ACME is concerned about the current balance and will be examining this as part of the Mathematical Needs project.

The need for stability in the curriculum was a strong message arising from the ACME annual conference this year. The landscape of constant change undermines the efforts of schools and teachers.

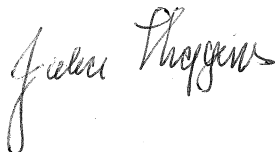
Although there are several points with which ACME can agree, I would also like to draw attention to areas that ACME would wish to see debated further before any policy decisions are made. It is worth noting, for instance, that the purpose of each successive stage of the education system extends beyond preparing students for the next phase – it is important that qualifications are developed to hold a value in their own right and not just serve as an interim indication of achievement before progression. The majority of students do not progress to HE, and the interests of these learners should not be ignored.

The report correctly identifies some important issues at the top end – relating to those achieving high grades at A-level and intending to progress to HE – but allows the suggested solution to these issues to drive the education system for the whole of the ability range. Indeed, the proportion of young people achieving three A grades at A-level is less than 4% of the age cohort, and around 6.5% of those entering university. Mathematics is important to all learners, and the context of widening participation in this most important of subjects should be the first port of call in developing educational policy.

As part of its 'Mathematical Needs' project, ACME is undertaking an assessment of the mathematical needs of business and HE, and universities themselves will have a key role to play in ensuring that a learner's transition to HE is smooth – universities will need to work responsively with others to ensure that the country's mathematical needs are met.

ACME would be pleased to discuss these points with you further, and would encourage further dialogue with other stakeholders to gain a broader picture of the educational landscape.

Yours sincerely,

A handwritten signature in cursive script, appearing to read 'Julia Higgins'.

Professor Dame Julia Higgins FRS
Chair, ACME

CC: Sir Richard Sykes

