

Maths being dumbed down in key A-level subjects, warn experts

By Graeme Paton

A-LEVEL exams in a series of subjects are failing to contain enough maths questions, it was claimed today, leaving teenagers with poor numeracy skills.

Researchers warned that qualifications in subjects such as the sciences, economics and business studies were failing to prepare young people for university or the workplace.

In a report, it was claimed that maths was a vital component of many other disciplines but it was often too easy or featured in a "very limited way".

Just four per cent of marks in some A-level economics exams and two per cent of marks in business studies papers required maths, the study found.

Academics are calling for a toughening up of the subjects as part of a review of A-levels.

Recently Michael Gove, the Education Secretary, outlined plans to give universities control over setting syllabuses and exam questions in the traditional "gold standard" qualification.

Anthony Tomei, director of the Nuffield Foundation, which contributed towards the research, said: "It is a common complaint from higher education that students come unprepared for the quantitative demands of their subjects, so the question of what mathematics should be required in A-level teaching is important."

Two separate reports published today analysed the maths content of nine A-level subjects, saying a grasp of issues such as statistics was vital.

One study by the Science Community Representing Education (Score) – a group of learned bodies – looked at biology, chemistry and physics.

Another report from the Nuffield Foundation analysed exams in business studies, computing, economics, geography, psychology and sociology.

In the first study, experts said that

areas of maths which underpin scientific ideas were missing from the exams.

The report raised concerns that competition between exam boards prevented them setting papers or assessments "that might appear difficult, for example by including more and more challenging mathematical content."

Prof **Graham Hutchings**, chairman of Score, said the findings were "worrying".

"Mathematics enables students to understand and describe many scientific phenomena," he said. "Without learning some mathematical techniques, students are missing out on gaining a full understanding of the scientific ideas."

The second study found huge variations in the maths content of

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papers set by different boards. For business studies, pupils needed maths for between two and 36 per cent of marks, depending on the exam. Maths was needed for between four and 14 per cent of economics papers and 10 to 20 per cent of geography exams.

A study this year found almost half of British adults have the maths skills of an 11-year-old or worse, leaving them struggling to manage their finances.

A spokesman for the Department for Education said: "We need to keep A-levels robust, rigorous and relevant to match the best education systems in the world and to keep pace with universities' demands."

"That is why we believe universities should have greater involvement in the design and development of A-level qualifications."

