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Pocket Watch – Doing the maths

Introduction

Both major political Parties are now committed to ensuring that young people continue to study maths up to the age of 18 but the question is what sort of maths, particularly for those who have struggled with maths so far and there's a lot of those. A levels, particularly if they become university endorsed may suit some, functional maths others but what about the inbetweeners? In her Report last year, Carol Vorderman proposed a dual model at GCSE, one formal the other practical with a range of options post-16. Earlier this year, Elizabeth Truss MP, who now of course leads on qualification developments at the Dept, proposed a three level model for 16+ year olds: Higher; Preparatory; Core based on progression requirements. Now the Government is turning to the maths experts themselves, funding the charity Mathematics in Education and Industry (MEI) to work with the Advisory Committee for Maths Education (ACME) and come up with some bright ideas

What's being considered?

Essentially a more stimulating curriculum that uses a problem solving approach in contextual situations. Many will be familiar with the 'make it relevant and you make it more appealing' argument but this has gained a new lease of life and perhaps respectability with the support of a Cambridge Professor of maths, Sir Tim Gowers. The Gowers approach relies on starting with a 'real world' problem and then drawing on maths skills to solve it rather than the other way round. His blog, which the Secretary of State has cited, suggests a series of problems that require the application of maths skills and deemed as more stimulating than traditional exam questions. Questions like 'How many people would fit in the Isle of Wight?' or 'You are in a maze. Devise a method that will guarantee that you will eventually find a way out' requiring in various degrees an understanding of algorithms, estimation and reasoning are typical examples. At present such questions are aimed at A level candidates but MEI is keen to consider how far such an approach could be adopted for other maths qualifications.

The post-16 maths problem

Although the number of young people taking A levels maths has been steadily rising, it was up just under 4% again this summer, it still leaves us behind many competitor countries. A lot of work is being done devising alternative forms of maths provision to try and encourage greater participation beyond the age of 16. The Pearson Think Tank for instance published its own [Report](#) in July and ACME itself has identified a number of requirements considered essential to improving maths participation including more appropriate qualification structures and support from HE and employers

What happens now?

ACME is hosting a workshop this month to consider different types of maths qualification and perhaps more significantly how they could best be assessed. It will report its findings back to the Dept. More broadly, the Government remains keen to see universities such as Cambridge take a lead in endorsing the quality and rigour of A level specifications in future



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