



HoDoMS 23 April 2014

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Advisory Committee on Mathematics Education

# ACME's work 2013-14

Consultation  
responses:  
Mathematics  
curriculum,  
qualifications etc.

Mathematics  
post-16:  
provision &  
participation

Mathematics  
teachers:  
professional  
development



Nesta...

Commons Select Committee

Business, Innovation and Skills Committee



Department for Education

Commons Select Committee

Education Committee



Department for Business Innovation & Skills



# Professional Development of Teachers of Mathematics

## New report 'Empowering teachers: success for learners' published on November 2013

- Professional development should be:
- o accessible to all teachers of mathematics
  - o specialist, supported and sustained
  - o of the highest quality

**Advisory Committee on Mathematics Education**  
**ACME**

### Empowering teachers: success for learners

www.acme.org | November 2013

#### Foreword

Professor Stephen Sparks FRS  
Chair, Advisory Committee on Mathematics Education

There is widespread agreement about the importance of mathematics for individuals and for wider society. The Advisory Committee on Mathematics Education (ac me) believes that all students should receive high quality mathematics teaching from teachers who are themselves professional learners. A world-class education system needs to empower its teachers by nurturing a culture of professional development: all teachers should be enabled to, and take responsibility for, continuing to update their skills and subject expertise throughout their career.

In 2009, ac me published its first report on continuing professional development in mathematics. While there has been change for the better, such as the establishment of the national centre for excellence in the teaching of mathematics (nce tm), many of the recommendations ac me made in 2009 have not been fulfilled and this is a cause for concern. In December 2012, during a year of national educational reform, ac me decided it was time to look at professional development again. We drew upon the expertise of our networks of advisors, as well as new academic research and policy reports, and commissioned a leading academic to identify problems and programmes that support professional development for teachers of mathematics.

In this report, ac me considers the challenges of making it easier for professional development. We have identified changes that need to take place at national, regional and school level. ac me has come to the conclusion that there are also aspects that need addressing.

Firstly, all teachers must have access to mathematics-specific professional development opportunities. Given that the majority of school leaders will not be specialists in mathematics, they need help and advice about what good professional development looks like for teachers of mathematics. It is not ac me's role to make or disseminate this advice, but in this report we identify what is needed to achieve this objective.

Secondly, our review confirmed that excellent professional development is tailored and subject-specific: teachers will need access to good quality professional development throughout their careers, in order to cope with the changing view of mathematics and the latest understanding of student learning. For example, the principles of large class size and increasingly powerful technologies mean enabling mathematics to be used and taught in new and exciting ways and this should be reflected in teachers' practice.

Finally, it is difficult for schools, colleges and universities to identify high-quality professional development activities from the range of options offered by organisations and individuals. In order to support teachers and others in choosing from this abundance of offers, we are convinced that quality assurance mechanisms and support for professional development providers are key. We make proposals to ensure this is achieved.

There are many educational reformers that aim to improve and support mathematics teaching. These chains of actions will be much greater if they are supported by high-quality professional development. Adopting the recommendations set out makes it the report and ensuring professional development for teachers of mathematics will lead to success for our students and for the system.

*RS S Sparks*  
Professor Stephen Sparks  
Chair, Advisory Committee on Mathematics Education

The findings information provided in this Advisory Committee on Mathematics Education (ACME) 'The Report' document, 6-10 Carlton House Terrace, London, SW1T 2AG. Tel: +44 (0)20 7611 3175. Email: acme@acme.gov.org.uk www.acme.gov.org

EMPOWERING TEACHERS: SUCCESS FOR LEARNERS

## Maths Hubs

# Qualifications overview – an ACME perspective

## GCSE

- Has been reviewed
- All students without GCSE grade C **required** to study mathematics post-16
- Are new qualifications needed for this group of students?

## Core Mathematics

- New qualifications are being developed
- Performance measures as driver
- What are the roles of HE and employers?

## A level

- A level Mathematics and Further Mathematics
- A success story
- Can we predict the impact of current policy?

# GCSE Mathematics Reform

## What has happened?

2015 – new GCSE  
Mathematics

Linear exams

Larger GCSE

Counts as 2 GCSEs in  
performance tables

More problem solving

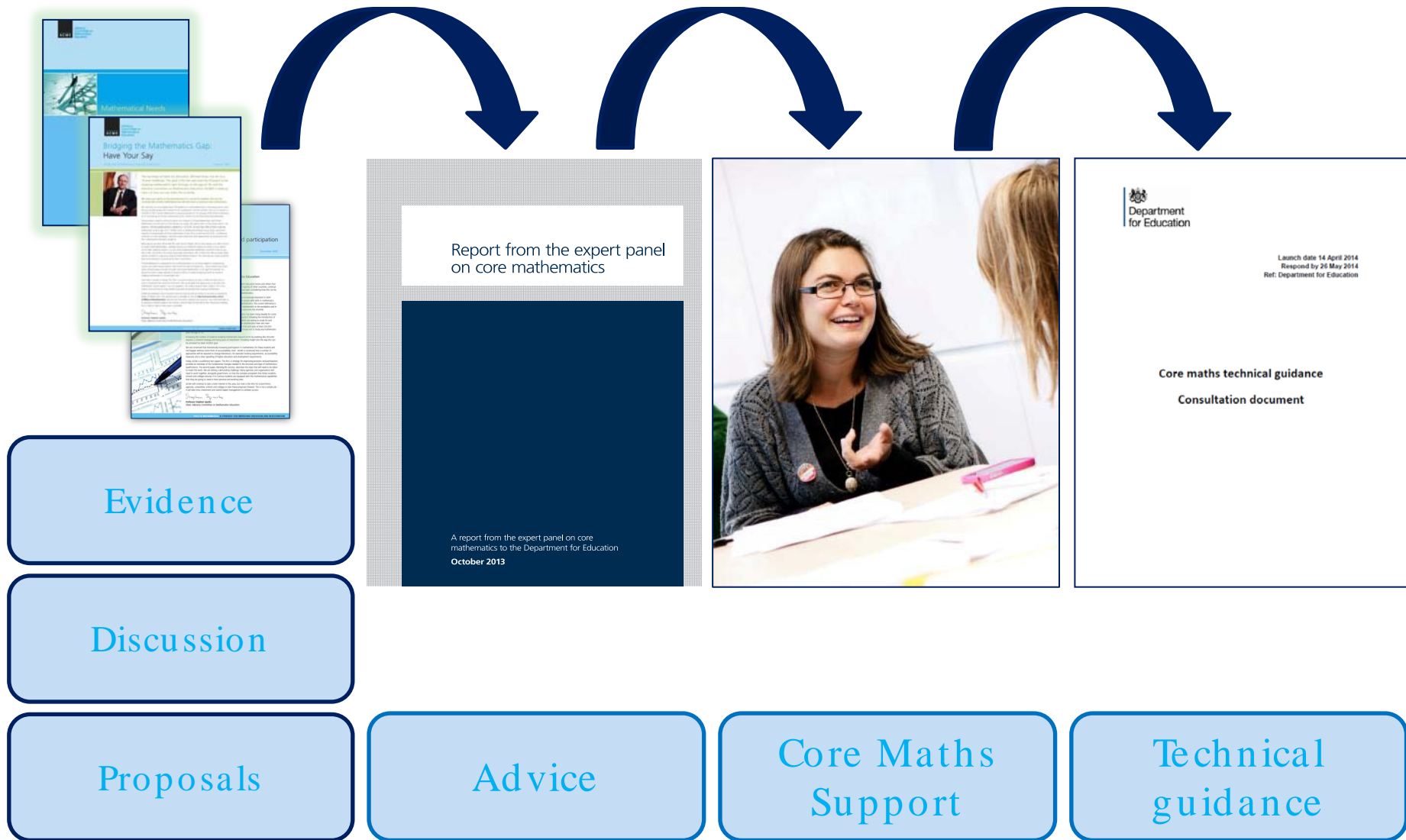
## What does this mean?

More teaching time =  
teachers in schools?

More teachers needed in FE?

Assessing problem solving

# Core Mathematics





# A level Mathematics Review Timeline





# ACME's priorities today

## Aims for AS and A level

- Clear aims and objectives for all maths qualifications (Core Maths, AS and A level, Maths and Further Maths)

## Assessment

- To improve the validity of assessment

## Further Mathematics

- Seek flexibility within AS/ A level Further Mathematics

## Process

- Continuing concerns with the timescale.
- Lack of clarity of roles of DfE, Regulator, Awarding Bodies

## Uptake

- Potential detrimental impacts

# ACME Open Call 2014

The open call will be launched next week  
Applications close 30 May  
Interview in June

- **ACME Open Call**, April 2014
- **Website:** [www.acme-uk.org](http://www.acme-uk.org)
- **Twitter:** @ACMEmaths
- **Blog:** [www.acme-uk.org/maths-memos](http://www.acme-uk.org/maths-memos)
- **Newsletter:** sign up on the website
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