

EDUCATION STRATEGY GROUP MEETING, 25 FEBRUARY 2009

SUMMARY OF DISCUSSION AND OUTCOMES

1. **New Chair:** this was Dr Penny Bidgood's first meeting as Chair of ESG.
2. **Education Statistics Users Group:** It was agreed that given other priorities, this initiative whilst it was still considered worthwhile, would not be taken forward at present.

3. RESPONSES TO CONSULTATIONS

GCSE Mathematics: the Group commended the RSS press release, December 2008, issued following the announcement of the pair of GCSE Mathematics was to be piloted from 2010. All three awarding bodies would be taking part (with different shades of emphasis on Statistics given by each) and the GCSE pair would not be taught before 2015 (i.e. with first full cohort of graduates in 2017!). The Group also considered the RSS response to ACME concerning the Ofqual criteria for the single Mathematics GCSE due to be introduced in 2010. There was concern that the criteria for this qualification had been very (too!) quickly developed. The next step would be for awarding bodies to write specifications which conform to the criteria. The RSS had raised its concerns with ACME. It was thought important that the development of the GCSE pair pilot was not accidentally compromised by problems arising from the single GCSE criteria*.

* See www.acme-uk.org/downloaddoc.asp?id=97 at "GCSE1" (pages up to 10) and "2" (pages 11 to 19). ACME had previously developed draft criteria for GCSE 1 (Mathematics) and GCSE 2 (Mathematical Thinking)

A-level Mathematics: first teaching of the new A-level was due to take place in 2011. This was not the optimum time for such a change as the first graduates of the two Mathematics GCSEs would be in 2012 and so 2013 would be the optimum time to make changes. The new A-level criteria included pressure to reduce the amount of assessment and to move to a 4-module structure. Two subject structures were being piloted (AQA and Edexcel) for 2 years.

The case for some 'pure' modules to include 'modelling' had been made but was not completely convincing. There remained concerns that so little time invested in learning Statistics would lead to very little being learnt/achieved.

The QCA had issued the draft A-level criteria for Mathematics as part of a draft 'pre-consultation'. The planned consultation was to present three alternative structures for GCE Mathematics/Further Mathematics in a 'neutral' way. Ref GCE subject criteria for Mathematics: there was concern that the RSS had not been asked for feedback on the AS content which without further modification would do nothing to open the field of statistical enquiry up to GCE Mathematics learners. The criteria were predicated on the notion that there would be just four modules in the assessment and that applied mathematics would be limited to a very restricted diet of compulsory material. More probability and statistics needed to be injected at AS and A2. The AS was particularly in need of more Statistics.

Group members were very supportive of the idea of Use of Statistics which currently existed as an AS and as a pilot. It was thought that there could be an interesting consultation on the principle of having a full A-level in the Use of Mathematics.

Diplomas: a lot depended on the position of diplomas. Where did the new A-level fit into the new 14-19 Diploma structure? A-level Use of Mathematics content would sit well within Diplomas (it could take the place of functional mathematics at this level). However, it was noted that whilst 'Use of Mathematics' was a great idea for students intending to study non-mathematical subjects at university, to take a Mathematics degree you would still need to have undertaken pure mathematics at level 3 as well.

An audit of each diploma and its planned (statistics) content was needed. A decision would then be made about which issues in which diplomas could be addressed in the time available.

EDUCATION STRATEGY

The planned 'Away-day' had not yet taken place. This affected any possible redirection of the strategy as well as other outcomes such as the promotional leaflet and expansion of the network.

RSS 175th Anniversary: the education Anniversary programme would comprise the 'Future Prospects Fair' and an 'Our Guys in Scotland' 'tour' by four Guy Lecturers.

RSS Conference 2009: it was hoped that there could still be an education element to the RSS conference, subject to a volunteer being identified to develop ideas for such a meeting and to then plan it. A potential theme would be 'Developments over 175 years' with a focus on the future of statistical education... and could provide a strong platform from which to launch a future campaign approach.

EDUCATION STRATEGY GROUP MEETING, 25 FEBRUARY 2009

RSSCSE Certificate in Teaching Statistics at Secondary Levels: a second showcase event for teachers had taken place at Errol Street on 21 January 2009. A further event was being organised in Leeds via the local Business Education Partnership on 25 March 2009.

PGCE Student Workshop: the Society's first workshop for PGCE students had taken place on 19 January 2009 at Errol Street. It was agreed that PGCE courses were very crowded.....and that the Society needed to do more to increase the statistical content of PGCE programmes. The search for a colleague(s) to take the lead in developing more content would begin.

Careers Presenter Register: two talks had taken place in Leeds and in Kent and a third also in Leeds was planned by end March. A fourth talk in Liverpool was likely to take place by end May.

Schools Lecture Programme 2008/9: the programme to date had included talks at Kingston University, King Edwards Five Ways School, St Paul's School and Wells Cathedral School. Still to take place were: Sandown School on the Isle of Wight; University of Glamorgan; Queen Elizabeth's Grammar School, Blackburn; the Cotswold School, Bourton-on-the-Water; Plymouth College; University of Glasgow and Imberhorne School, East Grinstead and Wallington County Grammar School, Surrey.

Guy Lecturer 2009: a new lecturer was agreed. (Further details to be announced once the new lecturer is formally 'confirmed' by RSS Council.)

KS3 Lecturer: there was moderate support for a second lecturer for KS3 students. The idea had since been parked. Each lecturer might be approached for an adaptation of his/her talk for a younger audience. In all cases, speakers need to be able to hold the attention of a large number of KS3 students for an hour.

Bringing Significance to the Classroom Project: two sets of materials had been commissioned, one on the mark-recapture 'Petersen' method and one on the Olympics. These would be highlighted via articles in future issues of Teaching Statistics and links to new resources and materials would be shared. First set to be available in Autumn 2009.

BA Mathematics Section: it was noted that the BA had been renamed the BSA (the British Science Association). Simon Singh was to be President of the Section in 2009. Most of recent correspondence had concerned the mathematics community attempts to co-ordinate last-minute contributions to the 'Big Bang Fair' in early March 2009. Efforts were made to identify interactive stands (representing projects or exercises which students could participate in during the 3-day fair) also to find volunteers to help with co-ordinating the Fair and being present at guides or support staff. The RSSCSE's projects were suitable but no staff member was available at short notice during the given dates. A suitable Pfizer project was 'under development' and not ready to exhibit at the Fair this year. It was agreed that the Group needed to be in a better state of readiness for similar future requests.

Festival of Science, 5-11 September 2009, Guildford and Festival of Science 2010, Aston: two proposals had been put to the BSA by the RSS. 'How do we count? - a review of the census system' had been rejected and BSA colleagues had suggested that the programme might be put forward for consideration in 2010 (nearer to the time that the census would change). A meeting entitled 'Mathematics and Meltdown: how financial systems collapse' had been accepted and the timing allocated by the BA was Saturday 5 September (1500-1700 hrs) on campus at the University of Guildford.

BA National Science and Engineering Week (6-15 March 2009) – a second Future Prospects (careers information and new developments in the sciences) fair for undergraduate and postgraduate statisticians and scientists was being organized at Errol Street.

SCORE: Statistics from Science 'Future Morph' website: it was noted that there was no statistics careers content on this website.

Science-based issues events in schools: a Planet Earth symposium was being organised at Crickhowell school in Powys. It would take place on 20 October 2009.

Science Council: the RSS had been formally accepted as a licensed body for the award of Chartered Scientist status and CStat members had already started to apply for CSci status.

EDUCATION STRATEGY GROUP MEETING, 25 FEBRUARY 2009

REPRESENTATION ON OTHER BODIES

JMC: Professor Sutherland's tenure as Chair of the JMC was due to end in Autumn 2009. ESG discussed possible successors and agreed on a name which all Group members were keen to support.

BCME: it was hoped that the Statistics strand at BCME could be developed around the Bringing Significance to the Classroom Project at BCME7 (in April 2010).

WORKING WITH OTHER BODIES

ACME: ACME had posted its position statement on qualifications in mathematics at level 3 from 2011 to its site (essentially focusing on how to encourage fewer students to drop mathematics at age 16). See <http://www.acme-uk.org/downloadaddoc.asp?id=115>. Also correspondence on the ACME pair of mathematics GCSEs at: <http://www.acme-uk.org/page.asp?id=122>

Council for the Mathematical Sciences: in January 2009, CMS had submitted a response to the Innovation, Universities and Skills committee on placing science at the heart of government policy.

DCSF: the final version of the Society's response to the Children, Schools and Families Select Committee's inquiry into schools accountability had been developed. This addressed issues of Performance Monitoring and the Report Card. See <http://www.rss.org.uk/main.asp?page=1235>.

HEFCE: it was noted that from August 2009 the MoreMathsGrads project would be replaced by the new HEFCE-funded National STEM programme (run by the University of Birmingham) which had been charged with delivering employer engagement and work-force up-skilling. Four regional consultation meetings would take place in February when final decisions about the nature of the programme would be taken. The RSS had supported the MoreMathsGrads project and was also very keen to support the new programme.

QCA: The RSS had been represented at a QCA-initiated meeting focused on writing new criteria for AS and A Levels in Mathematics, Further Mathematics, Use of Mathematics and Use of Statistics. The meeting concerned the QCA's plans for the future of A Level Mathematics and Further Mathematics. Most attention was given to pure mathematics. The QCA model for Mathematics and Further Mathematics involved a complete separation of the two with no common units. In Mathematics there would be an AS unit that is half statistics and half mechanics, followed by a similar A2 unit. There would also be Statistics and Mechanics in AS Further Mathematics and in A2 Further Mathematics. None of the units had yet been written and this was to be done by a "small group".

It was suggested that AS and A Level Statistics should be renamed 'Use of Statistics' to tie in with 'Use of Mathematics' qualifications. There was disquiet about the possible consequences of extending AS 'Use of Mathematics' into a full A' Level. It was suggested that AS Use of Mathematics and AS Use of Statistics could usefully be put together as a 6-unit package. This idea was well received. It would require a lot of detailed work (and some RSS input!).

The RSS had also been represented at the first Maths Task Force meeting concerning the new Science Diploma. The meeting had considered whether to have a bespoke unit or to draw on existing qualifications. No final decision was made at this meeting.

RSS Centre for Statistical Education: Professor Davies reported his plans to meet with the Japanese Statistical Society in Japan in early March. The Japanese system was being reviewed and he would be advising Japanese counterparts on the assessment of statistics teaching and other aspects of the RSSCSE's work including CensusAtSchool and introducing them to Significance. It was also noted that Dr John Marriott was promoting the RSSCSE Certificate in Teaching Statistics in HE in Australia.

DATES OF FUTURE MEETINGS: Wednesday 13 May 2009 and 30 September 2009 (meetings will commence at 1100 hrs (and end no later than 1500 hrs unless otherwise notified.)