

The Council for the *Mathematical Sciences*

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Funding for Equivalent or Lower Qualifications

The Council for the Mathematical Sciences (CMS), comprising the Institute of Mathematics and its Applications, the London Mathematical Society, the Royal Statistical Society, the Edinburgh Mathematical Society and the Operational Research Society, is pleased present its evidence to the Innovation, Universities and Skills Select Committee Inquiry on Funding for Equivalent or Lower Qualifications.

The CMS aims to provide an authoritative and objective body able to speak on the role of the mathematical sciences in UK higher education, research, business, industry and the public sector, and to engage with and respond to policy decisions that affect the mathematical sciences in these areas.

This submission has been prepared on behalf of the CMS via a working group comprising representatives of the five mathematical sciences bodies named above and approved by the Chair, Professor Sir David Wallace.

Executive Summary

- Phasing out support for ELQ students would run counter to the Leitch agenda on skills and lifelong learning policies
- Specifically, we are concerned that the policy would work against the government's targets for increasing the number of specialist teachers in strategically important subjects by introducing disincentives to retraining or upskilling in these areas
- HEFCE's proposals for protection for strategically important and vulnerable subjects (SIVS) are not dynamic, and fail to recognise the significance of encouraging the study of even a small number of Higher Education mathematics and statistics modules
- The concept of qualifications being at an 'equivalent level' is not well-defined in relation to integrated masters courses and free-standing masters qualifications and could be problematic.

Arguments for and against the Government's decision to phase out support to institutions for students studying ELQs

1. The need for retraining and upskilling in mathematical sciences is well recognised – it is vital to the health of the economy and is a key part of government policy and the Leitch agenda on skills and 'lifelong learning'.
2. The need for suitably-qualified mathematics teachers has also been recognised¹. Phasing out support for students studying ELQs works counter to the government's targets by placing financial barriers between qualified teachers and opportunities to improve their knowledge with HE mathematics modules.
3. The most realistic way in which this upskilling of the workforce can be achieved is by part-time study, and it is vital therefore that changes to funding do not discourage this. However, HEFCE's consultation acknowledges that part-time study will be the hardest hit by the withdrawal of funding for ELQ students.

¹ For instance, paragraph 7.7 (and elsewhere) in *The Race to the top: A review of Government's science and innovation policies* (Lord Sainsbury of Turville, October 2007)

4. To quote from a recent White Paper on Higher Education²: "This is truly an era of lifelong learning. Today's generation of students will need to return to learning – full-time or part-time – on more than one occasion across their lifetime in order to refresh their knowledge, upgrade their skills and sustain their employability." A review of the funding of part-time education was promised during the implementation of this Paper; we would urge that any implementation of such a policy should be done only alongside such a review.

The timing of the decision and of the implementation of the change

5. The implementation of the policy relies on the ability to determine which qualifications are at an equivalent 'level'. It is not clear from the Government's proposal or HEFCE's consultation paper that a student with an integrated master's qualification (referred to as MMath below, but including MPhys, MSci etc) could still receive HEFCE funding for an MSc course, given that both qualifications would be at the 'second cycle' level in terms of the Bologna Process. It is important to realise the different purposes that MMath and MSc courses can serve. Many mathematical MScs act as a 'conversion' for specialism in an area useful for employment – such specialism would not normally be available on an MMath course. The suggestion that completing an MMath course would disqualify a student from funding for a more specialist MSc course would be very unfortunate and damaging. MSc courses can also serve as training for those who are returning to the discipline after a period in employment and who would be using the course as a route to a PhD or another career.

The exemptions from the withdrawal of funding proposed by HEFCE

6. HEFCE's proposals include some welcome protection for the funding of current levels of students classified as studying a Strategically Important and Vulnerable Subject (SIVS), but the methods for the 'targeted allocation' proposed are not dynamic and would prevent the UK from responding to changes in national needs. HEFCE states that the proposals have not been developed in order to incentivise growth, but it is precisely the strategically important and vulnerable subjects that need to be grown beyond current levels – this has been acknowledged by the Government and HEFCE.
7. The mathematical sciences community is grateful for HEFCE's support for projects such as *more maths grads*³, and for the government's recognition of the shortage of suitably qualified specialist mathematics teachers. It is hard to see any coherence in policy in trying to encourage more graduates and promote growth in this strategically important area while simultaneously removing the funding that would allow more people to improve their skills or change their career paths appropriately.
8. If the policy is to be implemented, we would strongly recommend that support for mathematical sciences is in the form of a complete exemption from the ELQ policy, rather than via the targeted allocation that HEFCE proposes.
9. We also have serious reservations over the criterion suggested by HEFCE for deciding which students would be classified as studying a SIVS, as we believe that the ability to acquire even relatively small amounts of mathematical sciences training is of disproportionate benefit and must not be hindered.
10. ELQ students contemplating a career change into school mathematics teaching or those already teaching and wishing to enhance their teaching of mathematics will often derive the relevant knowledge and skills from just a few mathematical sciences modules, and this needs to be recognised by the policy. Likewise, many other graduates in

² *The Future of Higher Education* (Department for Education and Skills, 2003)

³ See www.hefce.ac.uk/aboutus/sis/stemprojs/moremath.htm and www.moremathsgrads.org.uk for further information

employment become better equipped to contribute effectively within their jobs through study of a relatively small amount of mathematics, compensating for the shortcomings of school mathematical education over so many years. The need to be enrolled on a full degree programme with more than 50% based in a strategically important subject in order to qualify for the proposed support indicates that HEFCE has not recognised this.

11. National needs would be best met by regarding a much greater number of part-time mathematics ELQ students as exempt (or at least eligible for some degree of support) than just those studying for a full degree programme with 'substantial' mathematical content. The sums involved would be very small as a proportion of the total mathematics spend, but would have a substantial impact on take-up of the opportunities for valuable retraining and upskilling.
12. 'Mathematics' is listed as a SIVS in Annex C of the HEFCE consultation document. We would expect HEFCE to interpret 'mathematics' in this context as including pure and applied mathematics, statistics and operational research (i.e. the 'mathematical sciences') when considering support for SIVS.

The impact upon students, including whether the change will affect some groups of students more than others

13. HEFCE's consultation recognises that the policy will hit part-time learners the hardest, and it is reasonable to conclude that a substantial proportion of these will be women wanting to retrain before returning to work after a career break.

The impact of the change upon institutions, with particular reference to the long-term implications for specialised institutions such as the Open University and Birkbeck College London

14. It seems likely that only near-market disciplines would be able to attract funding from employers to support ELQ students, despite what HEFCE suggests. We understand that take-up of part-time study is very sensitive to price changes, and that the increases in fees required would dissuade huge numbers from enrolling. Conversely, if fees are not raised the withdrawal of funds would undermine the quality of support for all students, including those entering HE for the first time. Either way the policy appears to threaten the viability of the major providers of part-time Higher Education courses.

Council for the Mathematical Sciences
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