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Margaret Hodge MBE MP
Minister of State for Lifelong Learning and Higher Education

Miss Emma Rothschild CMG
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30th November 2001

Dear Emma Rothschild,

I am writing in response to the Council of Science and Technology report, *Imagination and Understanding*, published in July this year.

We very much welcome the report as a distinctive and timely contribution to our work, and especially so in connection with the recent White Paper *Schools - Achieving Success*, the review by Sir Gareth Roberts of the supply of scientists and engineers, discussions on the future of the Arts and Humanities Research Board and the Spending Review 2002. I gather that you are also already aware of the Quinquennial Review of the six grant funding Research Councils which is due to conclude shortly and also relates to your recommendations.

As a Government we have an agenda which links our determination to sustain economic success to building a fair and inclusive society and enhancing the quality of our lives. These are aims to which education and research in both arts and humanities and in science and technology need to contribute. Your report makes a convincing case that the links between disciplines in terms of breadth of skills and understanding, and innovative, inter-disciplinary research will be particularly valuable in the years to come.

Turning then to the report's principal themes and following the same order, we are at present taking work on these forward as follows:

Creativity in education (report paragraph 2.2): *The Qualifications and Curriculum Authority (QCA) is in its recent work providing guidance on "ways to promote pupils' creativity", especially in the curriculum for 5-14 year olds, with an emphasis both on the arts and on science, seen as a "creative process" ... We welcome these initiatives, and we*

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INVESTOR IN PEOPLE

encourage the QCA to further develop co-operation with groups in other countries working on similar programmes.

QCA's work on creativity in the classroom is part of the DfES general support for providing an enriched National curriculum where all pupils have the chance to experience a broad range of activities. We recognise that education is about more than the transmission of facts. The *Schools –Achieving Success* White Paper contains a number of examples of how we will encourage “Education with Character” that covers activities such as mentoring and work experience which help pupils to develop inquiring minds, creativity and motivation.

Specialisation in Secondary Education (report paragraphs 2.3 to 2.5): *The Government should continue with its efforts to facilitate a less specialised curriculum, including the consideration of additional elements of a Baccalaureate system. We urge universities and other higher education institutions to play a constructive role in encouraging diversity in the secondary school curriculum.*

Our White Paper and the Education Bill published on 23 November set out our plans for transforming secondary education, building on the firm foundations which we have established in the primary phase.

We intend to give successful schools the freedom they need to excel and innovate; encourage all schools to build a distinct ethos and centre of excellence, whether as a specialist school or by some other means; open secondary education to a new era of engagement with the worlds of enterprise, higher education and civic responsibility; and to build the curriculum – particularly beyond the age of 14, when the talents of pupils diversify – around the needs of each individual, with far better opportunities for both vocational and academic study.

We fully agree with the Council that a well balanced 14-19 phase of learning is crucial to achieve our objective of well-motivated young people playing their full part in society and in the economy. As the White Paper notes, there have been many serious attempts in the past to reform this phase of education, but the problems have never been adequately resolved.

Through the White Paper, we have therefore initiated a debate about what more should be done to improve the education of our 14–19-year-olds, and achieve necessary changes to long-established structures.

We are intending to discuss the vision, challenges and how best we can meet them with all the stakeholders, including employers and higher education, starting with a consultation paper on the issues and our proposals in more detail. This will include the pivotal question raised by the Council about how we can best ensure – and where desirable extend – breadth in the post-16 curriculum. It will also deal with such questions as:

- How to encourage all young people to stay in education and training beyond 16
- How to increase choice for young people from the age of 14, so that their individual aptitudes, abilities and preferences can be met
- How to break down the traditional prejudice against vocational education as a route to success and to enable more students to pursue a mix of vocational and academic routes, which will include some that are predominantly vocational
- How to tackle the institutional and systemic barriers to a 14–19 phase of education, encouraging schools and colleges to co-operate more closely in providing a broader range of options more suited to the individual student's needs, and

- How to challenge the assumption that all pupils should proceed through the system at the same pace, enabling some to accelerate, to take opportunities to broaden or deepen their studies, to spend more time on vocational options or to move on to advanced studies having taken some or all of their GCSEs early.

We will be introducing new GCSEs in vocational subjects in September 2002 and they will be available to all schools throughout the country by 2003. Schools and colleges are already implementing reforms to advanced level qualifications, with the introduction of new AS Levels and vocational A Levels. Despite acknowledged problems with implementation in the first year, the principles of the changes – to broaden the curriculum and increase flexibility – have been widely supported.

The changes that we announced recently to the assessment arrangements will make the reforms more manageable for teachers and reduce the assessment burden for pupils. We will continue to work to make sure that post-16 qualifications are valued and recognised by Higher Education and employers, as well as by young people and their parents.

Towards Diversity (paragraphs 2.6 to 2.9): *Universities and government should give serious consideration to encouraging broader programmes of undergraduate instruction, both in the sciences and in the arts and humanities.*

Your report makes an interesting contrast between the type of breadth most common in the UK – degree courses combining different subjects – and the much broader early curricula at Harvard and MIT which aim to introduce students to different approaches to knowledge.

The Government can help to improve the quality of higher education, and I am conscious of our need to work with the HE sector to ensure that there is a good range of programmes open to students. However, ultimately much of the responsibility for the nature of programmes of study lies with the universities that design and deliver them, and with the students that choose to undertake them. Progress could perhaps be made here by HE institutions themselves designing and offering this type of broader-based higher education, in order to test its effectiveness.

We have recently taken one step forward towards a more diverse and relevant HE curriculum by introducing foundation degrees. Foundation degrees are intermediate, vocational HE qualifications which have been developed through partnerships of higher and further education institutions, employers, National Training Organisations and other professional bodies. The first foundation degree courses commenced from Autumn this year and cover a broad range of subject areas which include information technology and creative industries. While they are focused on particular disciplines, foundation degrees all include core features which are the development of skills and knowledge, application of skills in the workplace, credit accumulation and transfer, and guaranteed articulation with at least one honours degree. To date around 100 higher education institutions are involved in foundation degrees.

In the *Excellence and Opportunity* and *Opportunity for all* White Papers, the Government stressed the need for an educational and training infrastructure that produces a supply of people with graduate and other qualifications and skills to fill the new jobs created by the knowledge driven economy. Both papers contained a number of relevant measures, including science enterprise centres, the new Cambridge- MIT institute, expansion of the Teaching Company Scheme, the establishment of new Faraday Partnerships, the new Higher Education Innovation Fund, and new regional University Innovation Centres and New Technology Institutes.

Learning and Confidence (paragraphs 2.10 to 2.13): *We urge the government to encourage the provision of training in information and communications technology for arts and humanities students, and we support the Nuffield Inquiry's recommendation that technological potential should be "fully exploited in language teaching and learning."* We recommend that the Science Enterprise Centres programme be extended to include the arts and humanities.

We will take account of the Council's views on these particular matters in our Spending Review 2002 work, along with advice from such funding partners as the Higher Education Funding Council for England, the Learning and Skills Council, and Local Authorities.

We have already responded positively to the Nuffield Language Inquiry and a Languages National Steering Group has been set up to develop and drive forward our plans for languages. The plans will include looking at ways of widening the range of opportunities for language learning through the use of new technologies to improve access and wider participation.

Through the cross cutting review of science and research which will feed into Spending Review 2002, we will be collaborating with DTI/OST to identify the priorities and requirements for funding knowledge diffusion and technology transfer mechanisms, including the future of Science Enterprise Centres and the Higher Education Innovation Fund, which is providing resources for a wide range of activities to link HE expertise to the wider needs of the economy.

An Arts and Humanities Research Council (paragraphs 3.12 to 3.13): *The Government should engage the arts and humanities more fully in the discussion and implementation of national and international research priorities. We urge the government to ensure that arts and humanities research has access to the infrastructure (computer equipment, language instruction, library resources) required to participate in outstanding scholarship and outstanding innovation. We recommend that the Arts and Humanities Research Board (AHRB) should now develop into a UK wide Arts and Humanities Research Council.*

Following the publication of the Council's report, and previous calls for the position of the Arts and Humanities Research Board to be reconsidered, I announced on 21 September a review of arts and humanities research funding. The key aim of the review is to ensure that arts and humanities are able to make a full contribution - alongside science and technology - to the nation's cultural and economic growth.

The review will advise me and education ministers in the devolved administrations on the best way forward for the administrative structures around arts and humanities research funding. One of the options the review will consider is whether the Arts and Humanities Research Board should develop into a research council, as your report recommended. The review will include consultation with the higher education sector and other interested parties - including academics and postgraduate students - and will report in the Spring.

We will be considering infrastructure funding as part of Spending Review 2002. Earlier this year HEFCE, in collaboration with UUK and SCOP, commissioned work to look into the resource requirements of the teaching infrastructure and non-science research infrastructure. This work will complement another study on the science research infrastructure commissioned by the Office of Science & Technology (OST) in which DfES has been closely involved.

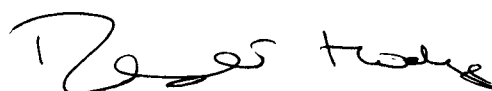
Professor David King, the Chief Scientific Advisor has already invited the AHRB's Chief Executive, Professor David Eastwood, to join his counterparts from the Research and Funding Councils at future meetings of the Science & Engineering Base Co-ordinating Committee, and I hope that this will go some way towards ensuring better discussion of research priorities across the disciplines.

I understand that the outcome of the Quinquennial Review of the Research Councils will be announced shortly, and that the issue of strengthening the links between the Councils and research funding partners such as the AHRB was addressed during the second stage of this review.

I look forward to meeting the Council on 3 December to discuss the issues raised in the report. I am copying this letter to your CST colleagues, David Sainsbury, Tessa Blackstone, Richard Wilson and David King. Following the meeting, I will arrange for this response to be published on the Council's website.

Thank you for producing such a stimulating and imaginative report.

Yours sincerely



MARGARET HODGE