The Save British Science Society

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Paying the proper price for the job

SBS response to HEFCE's consultation on developing the funding method for teaching from 2004-05

1. Save British Science is pleased to submit this response to the consultation on the funding method for university teaching from 2004-5. SBS is a voluntary organisation campaigning for the health of science and technology throughout UK society, and is supported by 1,500 individual members, and some 70 institutional members, including universities, learned societies, venture capitalists, financiers, industrial companies and publishers.

Inexplicable cuts in funding science and engineering subjects

2. SBS is perplexed at the method that has been used to calculate the proposed changes, particularly since it has ended up with the manifestly perverse result that funding should fall for subjects such as biology and electrical engineering.

3. Nobody who knows anything about the teaching of science and engineering subjects in modern universities can possibly believe that any of them is currently overfunded, or that any sensible proposal would suggest a cut. That biological sciences and major parts of engineering are facing such cuts seems to us totally bizarre.

4. Even if specific subject differences are ignored, and we look at the sciences as a whole, the overall picture is perplexing. Of the three core sciences, biology will lose 7.4% of its capitation per student, while chemistry and physics will gain 15.7%. According to the Higher Education Statistics Agency, there are currently 67,665 full-time equivalent students in biological sciences and a total of 20,250 in chemistry and physics.[1] All of these full-time equivalents are currently funded at the same level, in band B. This gives a total of 87,915 FTEs funded at the standard rate.

5. The mathematical calculations required to understand the effect of the new proposals are not difficult. If all else were to stay equal, the fall in income for biology (equivalent to a multiple of 5,007 of the current standard rate for band-B students) would be larger than the increase in funding for chemistry and physics (equal to a multiple of 3,179 of the current band-B rate).

6. Across the engineering disciplines, the increase in some subjects (1,223 times the band-B rate per student) is far outweighed by the decrease in others (4,719 times the band-B rate per student).[2]

7. Taken together, the core sciences and engineering would lose a total of 5,324 multiples of the current band-B rate under the proposals. Allowing for errors in the estimates,[3] at least 75% of this projected cut would be real. The band-B rate is currently £5,616 per student[4], so the fall in funding for core sciences and engineering under the current proposals would be approximately 75% of 5,324 times £5,616, a total of £22 million.

8. SBS simply does not understand how a Government agency can propose to cut £22 million for the teaching of sciences and engineering, in defiance of the stated policy of the Prime Minister, Chancellor and Secretary of State for Education, all of whom have repeatedly said that science education is crucial to the future of the UK's economy which must compete in an increasingly science-driven global competition.

The estimates HEFCE has used

9. Part of the problem arises because HEFCE has made the new proposals based on some estimate of what universities are currently spending. Given that universities can only spend what they have, this method is a bizarre attempt to estimate the real cost of doing the job properly.

10. In any business model, or personal financial decision, one would normally look at what one wanted to do, try to estimate the costs as best as one could, then calculate whether the available sources of income would cover the cost. If not, then a project or purchase could not go ahead.

11. In the management of the universities, this process is ignored. The Government sets ambitious targets for what the universities must achieve, including a policy of increasing student numbers. But instead of calculating what this will cost, and allocating income streams appropriately, a fixed budget is set in the light of other factors (such as other priorities within the Department for Education). That is what the current consultation is about a process that is explicitly "zero-sum".

12. While it is perfectly proper for the Department to make decisions about priorities, it is essential that the consequences are followed through. So when HEFCE receives a budget that is insufficient to fund what is expected of it, it is pointless for the Government to persist in an *Alice-in-Wonderland* denial that somehow by fiddling the sums, the money can magically be spread in different ways that will defy the laws of mathematics.

13. There is not enough money in the system to meet the demands currently placed on the higher education sector. SBS simply cannot see the point of wasting effort in shuffling the cards, a year or two before an entirely new system of funding based on top-up fees is due to be introduced, when there is no prospect of actually solving the chronic underfunding in the short term.

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[1] *All HE Students by Subject of Study, Domicile and Gender 2001/02,* Higher Education Statistics Agency.

[2] Based on HESA data showing full-time equivalent numbers of students of 3450 in Chemical Engineering, 215 in Minerals Technology, 155 in Metallurgy, 90 in ceramics, 2725 in Polymers and Textiles, and 1155 in Other Materials (all of whom would be funded at the higher level), together with 7845 in General Engineering, 8835 in Civil Engineering, 22,995 in Electronic and/or Electrical Engineering, 13,445 in Mechanical Engineering, 4.670 in Aeronautical Engineering and 5990 in Production Engineering (all of whom would be funded at the lower level).

[3] The rough calculations are slightly out because they include all UK students, including those studying outside England, and some students from overseas who are not funded in the same way. But all overseas students (including those from the European Union) make up almost exactly 10% of the total full-times equivalents, while England makes up 83% of the total. Allowing for the fact that some of the overseas students will be in Scotland, Wales and Northern Ireland, at least 75% of the calculated loss of income will apply to home students in England, and thus represents a real fall if the current proposals are implemented.

[4] *Funding Higher Education in England: How HEFCE allocates its funds,* HEFCE, 2003 [HEFCE 2003/29]