The Science and Technology Committee

The Science and Technology Committee is appointed by the House of Commons to examine the expenditure, administration and policy of the Office of Science and Technology and its associated public bodies.

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The Reports and evidence of the Committee are published by The Stationery Office by Order of the House. All publications of the Committee (including press notices) are on the Internet at www.parliament.uk/parliamentary_committees/science_and_technology_committee.cfm. A list of Reports from the Committee in the present Parliament is included at the back of this volume.

Committee staff
The current staff of the Committee are: Chris Shaw (Clerk); Emily Commander (Second Clerk); Alun Roberts (Committee Specialist); Hayaatun Sillem (Committee Specialist); Ana Ferreira (Committee Assistant); Robert Long (Senior Office Clerk); and Christine McGrane (Committee Secretary).

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First Special Report


Government response

1. The Funding Bodies should have looked at the quality of the arguments set out in the responses to their consultation and not just the numbers. The move away from the “one size fits all” approach advocated by Sir Gareth Roberts is an important principle which should have been adopted. We consider the Funding Bodies to be unjustifiably conservative in their proposals. We do not see it as HEFCE’s role to protect the sensitivities of universities. (Paragraph 16)

In undertaking and considering the Roberts’ Review, the Funding Bodies engaged the sector in two rounds of extensive consultation. The results of these consultation exercises were analysed both quantitatively and qualitatively. A persuasive case was made against the multi-track assessment process, which was thought by many respondents to encourage unhelpful stratification of the sector. In developing the processes for RAE 2008, the Funding Bodies have taken into consideration the responses to the consultation on Sir Gareth Roberts’ proposals, and incorporated many of the key features into the assessment process. Ultimately the Funding Bodies are mindful that the RAE needs to carry credibility both internationally and nationally. This could not be achieved without substantial buy-in from the HE sector to the revised proposals.

2. We believe that the panel/sub-panel structure is a positive step in improving consistency and improving the treatment of interdisciplinary research. We recommend that the Funding Councils seriously consider the establishment of panel moderators. (Paragraph 26)

We welcome the recognition that the two-tier panel structure introduced for RAE 2008 is a positive step towards improving consistency of assessment and the treatment of interdisciplinary research. Ensuring consistency of assessment is a major function of the new Main panels chaired by eminent individuals. We believe that the panel structure—with sub-panel chairs sitting on the Main Panels, Main Panels working across a number of disciplines, and Panel Secretaries appointed to work across a Main Panel—meets the spirit of this recommendation.

3. We welcome proposals to strengthen the use of overseas panel members. It should form part of a wider exercise to benchmark UK research. (Paragraph 32)

We agree that benchmarking UK research is an important task. The Funding Bodies are working with the OST and others to consider other possible benchmarking tools and approaches.
4. The panels and sub-panels need to be properly resourced. Overstretching staff and panel members could lead to panels reviewing individuals selectively and coming up with a biased or wrong conclusion on quality. Under-resourcing is an affront to the researchers and institutions who have gone to the trouble of putting the submissions together. (Paragraph 33)

We agree the need for a properly resourced RAE. The Funding Bodies have taken this into account in the establishment of the core RAE Team; through the revisions to the appointment process for Panel Secretaries, who in 2008 will be seconded full-time from HEIs; as well as with the recruitment of Assistant Panel Secretaries to provide appropriate administrative cover for the exercise. On 28 September 2004, the four UK higher education Funding Bodies announced the appointment of 15 distinguished academics to chair the main panels for RAE 2008. The 15 main panels are part of a new two-tier panel structure for the 2008 exercise.

5. It is clear that the workload of panels is excessive but it is less clear how it can be reduced while all higher education institutions continue to enter the RAE. An excellent opportunity to reduce the burden on panels has been missed by the Funding Bodies in their decision not to support different assessment routes. In particular our proposal to exempt top-ranking departments would reduce the number of submissions that each panel needed to consider and enable them to give closer consideration to submissions. (Paragraph 34)

Whilst we acknowledge that the workload for the panel members is burdensome, the Funding Bodies’ consultation with the sector on the desirability of the “three track” assessment process had a mixed response. There was a substantial majority opposed to the idea, which runs counter to the desire for criterion referencing. Furthermore, in detailed consideration of the next process, the Funding Bodies were firmly persuaded that a competition based on subject review cannot exclude entire institutions. The two-tier panel system and the use of specialist advisers will significantly assist the assessment process.

6. We conclude that the definition of research employed in 2001 is broadly adequate. It is important that the panels give equal weight to pure and applied research and that higher education institutions perceive this to be the case. HEFCE should ensure that it is understood by everyone. (Paragraph 41)

We welcome this recommendation and agree that it is important that the definition is properly applied in the assessment of all forms of research. The revised framework is designed to ensure that applied research, joint submissions and interdisciplinary research are not disadvantaged. Panel membership will include people with experience of commissioning and using research, including those in industry, commerce and the public sector. The Funding Bodies are working with panel members, subject communities and institutions to ensure that this is understood.

7. It is not acceptable for peer review panels to rely on the place of publication as a guarantee of quality. We recommend that HEFCE instruct panels to desist from this practice for RAE 2008 and ensure that panels are sufficiently large and well staffed to make informed judgements of the quality of the submissions. (Paragraph 42)
The Funding Bodies will seek to ensure that the panels being established for the 2008 RAE are configured in such a way that they have within them, and through their special advisors, the competences they need to support informed judgement. Panels will not be allowed to make purely mechanistic judgments of quality.

8. The RAE should recognise that excellent research may not be internationally significant but it may transform the fortunes of a local business or the provision of public services. We recommend that quality criteria concentrate more on the impact of research rather than the place where it has been published. (Paragraph 43)

In determining the grade quality descriptors, the panels will take account of the fact that research of the highest quality may not always have an international dimension.

9. We recommend that, once formed, panels publish rapidly clear guidance on how they plan to use metrics to inform their appraisals. This should be considered a priority. (Paragraph 46)

There is widespread support in the higher education sector for an assessment process which is underpinned by peer review. The current RAE 2008 framework already allows for differential use of metrics in different disciplines; but this would be a matter for each subject panel to consider and consult with its subject community about. Notwithstanding this, the Funding Bodies are investigating how metrics may be used in future to support or challenge the decisions of panels. In September HEFCE jointly sponsored with OST an international workshop on the use of metrics to examine these issues.

10. The introduction of a quality profile is a significant step forward and, if associated with an equitable funding formula, could eliminate many of the iniquities of the previous grading system. (Paragraph 49)

We welcome this recognition that the quality profile is a potentially useful measure to reduce games playing and the difficulties of “cliff edges” in grading structure. We see this as one of the major reforms enabling the Government with Funding Bodies to assess and reward areas of research excellence wherever they might be found.

11. We welcome HEFCE’s acceptance that the tactics employed by universities to improve their RAE grade are not all part of a legitimate research strategy and recommend that it publishes analyses of the strategies being employed by institutions and provide guidelines on what it considers to be acceptable practices. (Paragraph 52)

The Funding Bodies recognise that the RAE is as susceptible to “games playing” by those who participate in it as any other competition, and have taken steps to limit the degree of advantage which can be gained from such tactical activity. As in previous exercises, the Panels will consider institutional research strategies (both retrospective and forward-looking) in their assessment process. There will be Equal Opportunity training and guidance for panel members. Submitting institutions will also have to declare that they have Equal Opportunity policies in place, which have been operated in relation to the RAE submissions process.
12. It seems likely that the media will defy the Funding Bodies’ best intentions and distil the quality profile down to a single figure, thus encouraging the exclusion of the least productive researchers if this is permitted. (Paragraph 54)

The Funding Bodies are committed to publishing the results as “quality profiles” and will attempt to explain the procedures for collecting and assembling those profiles. Although it is true that single “league tables” will oversimplify this complex data, it is not possible to pre-judge how the media will interpret the results of the RAE.

13. We think that greater transparency about the RAE, including the public disclosure of included academics, would have many benefits. It is important to highlight the valuable work done by excellent administrators and by lecturers who invest time and intellect in their teaching. We feel that greater clarity about the role of these academics could increase the value attached to their work. We recommend that as a condition of their block grant, higher education institutions publish an annual staff audit, describing the contributions of all members of academic staff to research, teaching, administrative and other functions. (Paragraph 55)

14. In our earlier Report we reported that women academics were more likely to take on more of the teaching and pastoral functions within departments. It is our view that the issue to be resolved here is the status accorded to academics who take on these non-research but nonetheless essential roles. (Paragraph 56)

(13,14) The Funding Bodies recognise the important work undertaken by all those involved in the Higher Education system, whether researchers, educators or administrators. The creation of the UK-wide HE Academy to focus specifically on the learning experience, including standards and development, enhancement, and research will further support the Funding Bodies’ individual initiatives. The review of research priorities, and the way that institutions plan, develop and use all their staff are matters for institutions to determine as part of the management of their organisation.

However, it is not the place of the RAE to make judgments on the quality of either teaching or administrative work. Teaching quality is already assessed and reported by other means. An additional survey of the non-research contributions of all staff would in our view be an unwelcome extra reporting burden on the sector, and would add little value to the judgments formed either through the RAE or other assessment and monitoring processes.

The Research Assessment Exercise makes no judgment about the quality of non-research activity undertaken, nor the status of those who undertake it, whether male or female. HEFCE has undertaken its own research into the issue of female participation in RAE 2001, and will be discussing this issue with, amongst others, the AUT in the near future.

15. HEFCE assures us that panel members, secretaries and RAE team staff will be bound by a duty of confidentiality. We anticipate that this will be challenged in the courts in a bid to reveal publicly the judgements made about the performance of researchers. We recommend that such a move should be pre-empted and that the grades awarded to individual researchers should be made public. This would bring welcome transparency to the process. (Paragraph 57)
All those involved in the assessment process will be bound by a confidentiality agreement. Furthermore, it is very important that all those in the assessment process understand that the assessment is not an assessment of individuals, but rather it is an assessment of the quality of research undertaken by an institution in a submission to a unit of assessment. We will be discussing this with Panel members to ensure that they do not operate at the level of grading individual researchers.

16. Although Sir Gareth’s proposals for the assessment of “research competence”, if implemented, would place a heavier burden on the RAE, we believe that the need to promote good practice is so important that it should be used alongside other incentives to promote good practice in higher education research. (Paragraph 61)

As noted in response to recommendation 11 above, the assessment of research strategies is an important part of the assessment process in the RAE. Furthermore, the Funding Bodies are introducing other measures of research competence (eg through introducing minimum standards for Postgraduate Research Degree programmes and Human Resource Strategies), which should help to ensure good practice in research. The RAE process itself explicitly recognises that institutions should have appropriate equal opportunities policies in place, paying particular attention to gender, ethnicity, disability and experience issues.

17. We are disappointed that the Funding Bodies have rejected any form of mid-point monitoring. The RAE is designed to fund research excellence selectively and this funding should therefore reflect a department's current, and not only past, capabilities. (Paragraph 62)

In the Funding Bodies’ consultation on the Robert’s Review, 80% of respondents were against mid-point monitoring. This was seen to place a much greater burden on institutions already concerned by the level of work required to submit to the RAE. Institutions themselves have the opportunity to distribute funds according to current capabilities and needs, as QR is made as a block grant to institutions, not to departments.

18. The figures provided by the Funding Councils of the cost of the RAE to institutions do not appear to be excessive. The fact remains that this burden is resented by universities. The Funding Bodies should be sensitive to this feeling when developing their plans for 2008. (Paragraph 66)

We welcome the acknowledgment that the overall cost of the RAE is not excessive. The Funding Bodies endeavour to keep the burden on institutions to the minimum required to produce robust results upon which to make important funding decisions.

19. The Funding Bodies’ proposals have addressed positively many of our concerns about the RAE mechanism and HEFCE has adopted a more open-minded and constructive approach to its reform, which is a welcome change. A more radical approach, employing a range of metrics to reduce the bureaucratic burden on universities is still needed. We accept that their application will be a complex and time-consuming task for RAE and the Funding Bodies but we believe that the administrative burden should fall here rather than on the universities. (Paragraph 67)

20. We conclude that a range of measures could be used to replace the peer review process in some subject areas, such as the physical sciences. There are strong reasons to
believe that they could be as reliable as the current system while being more cost effective and imposing less of a burden on institutions and panel members. We recommend that the Funding Bodies commission an external study to consider options. (Paragraph 74)

(19, 20) We welcome the Committee’s acknowledgement of the positive steps the Funding Bodies have taken to reform the RAE mechanism. The Science and Innovation Investment Framework 2004–2014 sets out the Government’s commitment to develop metrics to shadow RAE 2008 to provide robust information to benchmark the outcomes of the RAE exercise (para 3.48). This will ensure that the metrics collected as part of the next assessment exercise will also be available to undertake an exercise shadowing the 2008 RAE itself. The aim will be to provide a benchmark on the information value of the metrics as compared to the outcomes of the full peer review process. DfES and OST are working closely with HEFCE and other partners (including international expertise) to explore the use of a range of metrics, and the Funding Bodies and key stakeholders are looking beyond the 2008 RAE to see how metrics can be most sensibly deployed to reduce the burden on institutions without compromising the credibility and reliability of the exercise.

21. We accept that there are practical difficulties in delaying the next RAE and recommend that the RAE continue as proposed in 2008 but that the Funding Bodies draw up a clear timetable for the development of alternative models of research assessment. (Paragraph 77)

As stated at the beginning of this response, the Government and the Funding Bodies welcome the Committee’s recommendation that the RAE should go ahead as planned in 2008. All aspects of the RAE process will be kept under careful review and inform decisions about research assessment in the longer term.

22. Departments need to know how to play the RAE game, yet HEFCE is asking them to do it blindfolded. HEFCE should draw up guidance to universities on how the quality profile will be used to calculate the funding. We appreciate that there are a number of variables that cannot be known in advance of the RAE but HEFCE should have the capability to produce estimates which would enable it to provide indications about the level of funding provided to each band of the profile. It should do this without delay. (Paragraph 79)

It is important to separate the need for transparency and support for institutions and departments which need to know how to follow the rules, from unhelpful games playing. The priority is to fund the best research, but we are mindful of Sir Gareth Roberts’ recommendation about the steep cliff edge. As his report says, there are too many unknown variables – the gradient of each quality profile; the numbers of departments submitted; the numbers of staff submitted and the exact level of funding from Government – to make it virtually impossible to make any definitive statements on funding prior to the RAE results being known. The general thrust of the report welcomes attempts by the Funding Bodies to minimise games playing (para 80). The Government will work with HEFCE on funding to ensure that the sector is clear about our overall policy objectives, and it will consult with HEFCE about funding levels within our overall policy of excellence.
23. It is not clear to us why HEFCE has deemed it necessary to further increase the level of selectivity of QR funding. We regret that it will intensify many of the problems caused by the RAE and the funding decisions based on it. (Paragraph 81)

The Government’s policy is to target resources selectively on the best quality research to sustain world class status in the long run. Within the context of finite funds, it is important that the Funding Bodies should continue to fund the highest quality research (as judged by the RAE) at a sustainable level. The selectivity ratio will therefore vary according to both the overall performance by the sector in the 2001 RAE and the funding made available by Government. A less selective ratio for funding would have to be at the expense of reducing funding for 5 and 5* departments.

24. We welcome HEFCE’s capability funding as a means of building research capability and promoting dynamism in the research base. We are concerned, however, that it is too restrictive. We believe that all departments should be eligible and grants should be awarded on the strengths of their research and investment strategies. (Paragraph 84)

The Government believes that HEFCE’s present policy to support research in emerging areas is appropriate. HEFCE’s research capability fund is a recognition that certain subjects have a less well established research base. It is targeted on those subjects and on departments in those subjects that have demonstrated a reasonably strong base of existing achievement on which to build. HEFCE has reviewed its capability funding and has agreed to work with Research Councils and other partners to identify and jointly fund research in sub-disciplines (for example chemical engineering or nuclear physics) where the UK’s capacity is threatened.

25. We are pleased that Sir Howard Newby now recognises that a policy of highly selective research funding, based on the RAE, has had an effect on the viability of university departments in core subjects. The RAE does not take place in a vacuum and further changes are also now taking place in higher education following the 2003 White Paper and the introduction of variable tuition fees. It is too early to say what the precise impact of those changes will be. Concerns expressed so far, however, suggest that variable fees may also lead to closures of further university departments, quite possibly in the physical sciences. The operation of the RAE and variable fees may, therefore be mutually self re-enforcing and HEFCE should remain vigilant in these respects. (Paragraph 90)

The factors affecting departmental closures are complex. The principal driver for closures is a lack of student demand in certain subjects. In some cases, it may be part of the institution’s own financial management and institutional strategies, which may be accentuated by poor research performance. The ten year investment framework asks HEFCE to work with a range of stakeholders to co-ordinate national effort to address these subjects.

26. The provisions for HEFCE to delay closure or offer funding to struggling departments have been criticised for threatening the autonomy of universities but this encroachment on their independence is a price worth paying for the preservation of core disciplines on a national basis. We accept that these powers should be used with restraint but this is an important shift in policy we welcome. (Paragraph 91)
HEFCE has welcomed the Government’s request for the Council to explore the proposal that institutions should give notice to HEFCE of departmental closures. The issue is not about stopping autonomous individual institutions making sensible business decisions. It is about the sum of individual decisions having a negative impact on access to certain subject provision in regions and sub-regions.

27. The Government says it will assess the “trajectory” towards the full economic cost model in 2006 in time for the next Spending Review. We hope that it will use the opportunity to review whether the model is a viable one and whether the aim of rebalancing the dual support system could be achieved by a straightforward increase in the research funds available to the Funding Bodies. (Paragraph 94)

The Government has stated its commitment to Dual Support and to continue to increase funding for both sides of the Dual Support system. This has been welcomed by the Funding Bodies and the sector. It is recognised that the Funding Bodies’ side of dual support has not kept pace with the other side. The Government’s intention is not to increase either leg of the Dual Support system at the expense of the other, but to achieve balance on both sides of the system against a rising overall investment.

We support the principle that institutions should understand the costs of their various activities and that they should aim to operate on a sustainable basis. HEFCE’s Financial Memorandum with institutions requires them to recover the Full Economic Costs across the full range of their activities. Not to do so would continue to erode the HE asset base with long term damage to the higher education system. OST has worked closely with the sector to ensure the modelling base for Full Economic Costs (FEC) is based on robust data. The percentage of FEC and the timetable for reaching 100% FEC are due to be announced in early December.

28. We would like to see diversity in higher education research funding but it is hard to see how this can be achieved while the RAE dominates the funding landscape. We have concluded that new incentives for all areas of universities’ work are needed. Quality assessment for teaching has proved problematic and unpopular. The Government should consider more radical solutions, perhaps awarding teaching funds on the basis of outputs rather than inputs as has been the case. The “third leg” funds for knowledge transfer have grown in recent years but it is not clear whether they are yet sufficient to act as an adequate counterbalance to RAE-based funding. We conclude that a greater diversity of funding streams would act as a counterbalance to the RAE. The proposed European Research Council could contribute, as would the greater availability of research funds from other Government Departments. (Paragraph 96)

The ten year investment framework (in paragraph 3.4) highlights one of the strengths of the UK university system as its ability to secure a wide range of current and capital funding for research from a variety of public, private and other sources, ie Other Government Departments, UK based charities, UK industry, EU bodies and others. In the HE White Paper, the Government recognised the great deal of diversity that exists within the sector. We believe this needs to be further acknowledged and supported by a funding regime which enables each institution to choose its mission and the funding streams necessary to support it; and to make sure that our system recognises, celebrates and encourages different missions properly. Knowledge transfer is of particular importance. As noted in
the ten year investment framework, the Government's aim is to create a funding regime which promotes and rewards high quality knowledge transfer. As part of the 2004 Spending Review settlement, funding available for the Higher Education Innovation Fund (HEIF) will increase to £110 m a year by 2007–2008. The Government will also move towards a predictable funding allocation to HEIs on a national basis for knowledge transfer. This new allocation process will be introduced for a substantial part of the next round of HEIF.

November 2004
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