

Research Policy and funding

The Royal Society's response to the Higher Education Funding Council for England's review of research

Introduction

- 1 The Royal Society welcomes the opportunity to comment on the Higher Education Funding Council for England's (HEFCE) report on its review of research policy and funding. Although the Council's report was concerned with higher education in England, most of the issues raised there and in this response are relevant across the UK.
- 2 The Society agrees that for the purpose of determining the Council's funding, the definition of research at paragraph 47 is satisfactory, and in particular that it should not include advice and other professional activities, routine monitoring and testing, or product development.
- 3 The Society reaffirms its strong support for the Dual Support system, and its view that the criterion for distribution of HEFCE research funding should be research excellence. It believes that the current level of selectivity is about right, and provides the dynamism and diversity that is necessary to maintain the vitality of UK university research. It would be concerned if the resources associated with departments rated 3b and 3a were to be decreased significantly in order to protect those rated 5 and 5*.
- 4 The purpose of HE Funding Councils' research funding is to allow institutions to develop their research capabilities within the context of their overall mission, and to contribute to the maintenance of high quality research facilities in the UK. There is a need to provide flexibility to local management to develop their institution's strengths, with clear understanding of how their success or failure will impact on their future funding.

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- 5 The Society is concerned about the significant burden that the present funding arrangements place both on institutions as a whole and also on individual members of staff. It is essential not to increase this burden. Any new general funding streams should only be introduced if there are compelling reasons why the funding requirement could not be achieved through modifications of an existing stream, or through the incorporation of one or more existing streams into a new block funding stream with a wider remit.
- 6 Within this context, some care has to be exercised over any special treatment to help institutions build research capability where there has been a "market failure". It is important that explicit funding does not distort the decision making process, with "band wagon" effects resulting in the support of poorer quality research at the expense of higher quality work.
- 7 Overall the Research Assessment Exercise (RAE) is a satisfactory mechanism for determining the quality of work within units of assessment (UOA) as a key component for distributing Funding Council research funds. Studies have shown that although many of the criticisms of the RAE are largely unfounded in connection with its treatment of interdisciplinary, collaborative and applied research, and also of those entering or re- entering an academic career, some improvements can be made to the arrangements and it will be important to monitor the effect of changes introduced into RAE 2001. Perhaps the most important outcome from these studies is confirmation that there is widespread disquiet within the community that the RAE does disadvantage certain types of research or individuals. This can have a serious effect on the way both institutions and individual researchers behave, and it is therefore essential that HEFCE and the other Councils re-double their efforts to explain the arrangements for RAE 2001 and the way that the panels will be taking into account particular issues.
- 8 The Society is concerned that institutions and other bodies have increasingly used the RAE for a wider purpose than grading departments within a particular discipline as part of a funding mechanism. While the RAE outcome provides helpful feedback to managers within a department on the relative standing of the department within the discipline, it does not purport to aid comparisons across disciplines within an individual university.

- 9 **The remainder of this note sets out the Society's views on the HEFCE Report, with each section preceded with the relevant recommendations and questions from the Report.**

Principles and Purposes of Research Funding

Selectivity and Concentration

Report Recommendation 1: The HEFCE should continue to allocate research funds selectively, by subject, on the basis of the quality of research, and should not seek to concentrate funding in a limited number of institutions (see paragraphs 77-84).

Question 1: Do you agree that the HEFCE should continue to fund selectively on the basis of quality?

Recommendation 2: The degree of selectivity should aim to balance the need to enable world-class research to flourish, with the need to enable new subjects and new areas of excellence to develop (see paragraphs 85-89).

Question 2: Do you agree with the aim of balancing support for existing excellence with opportunity for new areas of excellence to develop?

Recommendation 3: Considerations of 'critical mass' should not play a part in decisions about allocations by the HEFCE (see paragraphs 90-92).

Question 3: Do you agree that considerations of 'critical mass' should play no part in the funding decisions of the HEFCE?

Recommendation 4: The HEFCE should aim to increase the amount of research funding available for distribution as QR, in order to allow improving departments to benefit and the funding for 5 and 5 departments to be maintained. If this should prove impossible, then the Council should pitch the degree of selectivity to protect the funding of top-rated departments (see paragraphs 93-5).*

Question 4: Do you agree with the intention to protect top-rated departments?

Recommendation 5: Funding should be retained for 3a and 3b rated submissions (see paragraph 96).

Question 5: Do you agree that funds should be retained for both 3a and 3b rated departments?

- 10 The Society agrees that:

- HEFCE research funds should be allocated selectively on the basis of research quality as assessed by peer review determined at a subject rather than institution level;
- institutional critical mass should not be a factor. On a UOA basis any necessary critical mass should be taken into account in the assessment exercise, and this may require a rule that to achieve a 5 or 5* rating a majority of permanent academic staff should be included in the assessment, although it is recognised that this will be difficult to implement where members

of a particular Department are not all submitted to the same UOA;

- HEFCE has to balance the resources required to enable world-class research to flourish, while still allowing scope to enable new areas of excellence and new subjects to develop;
- HEFCE should continue to include contributions for 3b and 3a rated departments, and that care should be exercised in any consideration designed to protect departments rated 5 and 5* in the RAE 2001 not to eliminate the funding components associated with these lower rated departments.

Strategic Alliances

Report Recommendation 6: Consideration should be given to providing specific funding to high performing units in English HEIs to enable collaboration with centres of excellence overseas (see paragraphs 97-100).

Question 6: Do you agree that there is a need for specific funding to high-performing units in English HEIs to enable collaboration with centres of excellence overseas?

- 11 Significant funds have been made available centrally by the Treasury for the development of the Cambridge MIT Institute (CMI). On the other hand, universities have been able to achieve some excellent, but smaller, strategic alliances without any additional public support, and it is not clear that there is a need for specific funding for such schemes. Nevertheless, should HEFCE decide that specific funding is required, the Society believes that it is important for the decision making process to be fully transparent.

Report Recommendation 7: We recommend that there should be no more, but not significantly fewer, than the present number of units of assessment (see paragraphs 101-5).

Question 7a: Do you agree that there should be no more than the current number of units of assessment?

Question 7b: Do you agree that there should not be significantly fewer than the current number of units of assessment?

- 12 The Society believes that the number of UOAs is about right, but there needs to be flexibility to ensure that the developing research groupings within universities can continue to map onto the set of UOAs. The Funding Councils may wish to consider, for example, units for “general science” and “general humanities”, to ensure an appropriate assessment of research where traditional discipline structures do not exist. While there are arguments in favour of larger units for all assessments – such as

physical and biological sciences, these would be difficult to assess. Furthermore, the larger units would mean the potential for greater changes in institutional funding at each exercise, creating institutional instability. Even with the existing UOAs, the Society is concerned that reductions in even one point on the rating scale can place the institution in financial difficulties. It therefore supports the continuation of the Council’s transitional arrangements when an institution is faced with significant reductions in its funding.

Report Recommendation 8: The HEFCE should continue to allocate its QR research funding between subjects formulaically and should not seek to exercise policy judgements about this (see paragraphs 106-116).

Question 8: In 1998, following a consultation process, the HEFCE rejected the introduction of a ‘policy factor’ which would have weighted funding towards priority subject areas. Do you agree that a policy factor should not be introduced?

Recommendation 9: The HEFCE should regularly review the relative costs of different subjects, and make any necessary adjustments to the price bands in the funding method (see paragraph 117).

Question 9: Do you agree that there is a case for regular review of the pricing bands in the research funding method?

Recommendation 10: The HEFCE should take into account in determining subject budgets the relatively lower level of project funds provided to arts and humanities subjects by the AHRB, compared with the grants from Research Councils to other subjects (see paragraphs 118-9).

Question 10: Do you agree that the level of project funds available in the arts and humanities should be taken into account in determining subject budgets (quanta)?

Recommendation 11: Further consideration should be given to whether the AHRB should be formally established as a Research Council (see paragraph 120).

Question 11: Do you agree that there is a case for the AHRB being formally established as Research Council?

- 13 The Society has previously commented on the proposal to introduce a policy factor into the funding formula [December 1998]¹, and counselled against the introduction of either a policy factor or one based on the UK’s standing in a particular subject. It agrees that subject allocations or quanta should be based on the relative costs of research in a particular discipline covered by the Funding Councils, which should be regularly reviewed. The differences are smaller than the differences in the total cost of research per capita because of the large component associated with academic staff salaries.

- 14 With the introduction of project funding through the Arts and Humanities Research Board (AHRB) it is not clear that any adjustment of the Funding Council block funding stream is required to take account of the relative size of the Research Councils/ AHRB budgets.
- 15 On the question of whether the AHRB should be a body funded from the Science Budget, this would probably require primary legislation to amend the Science and Technology Act 1965. There are clearly important interactions between the research in the natural sciences and the arts and humanities, and the Research Councils support some research in arts and humanities disciplines. Hence there is a case for exploring the practicalities of AHRC joining the other Councils under the same umbrella.

Report Recommendation 12: The HEFCE should ensure that its funding and assessment processes do not inhibit collaboration, and should consider whether to provide support for specific research networks; but there is no case for explicit funding for collaborative research activity in general (see paragraphs 121-123).

Question 12a: Are there ways in which you believe the HEFCE's funding and assessment methodologies inhibit collaboration?

Question 12b: Should the HEFCE provide support for specific research networks?

Question 12c: Is there a general case for explicit funding for collaborative research activity?

- 16 There is clearly a problem in so far as there is a general perception that the RAE disadvantages collaboration and multi or inter-disciplinary working. However, in the long run, fruitful collaboration should benefit the quality of research in individual departments, and so should provide a positive contribution to the research assessment. There is a danger that explicit funding for networking and collaborative activities will distort the natural development of such activities, with encouragement of schemes because of the availability of funding rather than for the research quality benefits. The funding of networks and collaborative activity should be possible within the level of flexibility accorded to universities within the block funding.

Research Assessment Exercise

Report Recommendation 13: There should continue to be a research assessment process, based on peer review, that builds on the solid and accepted foundations of the RAE (see paragraphs 124-130).

Question 13: Should there continue to be a research assessment process based on peer review, building on the foundations of the RAE?

- 17 The Society agrees that there should continue to be a research assessment exercise based on peer review, building on the foundation of the 2001 exercise. The effect of changes and enhancements introduced into the 2001 RAE need to be carefully monitored to see if they achieved the desired outcome. This review must be transparent and the results made widely available. It is important that any future criteria are made available to the sector in sufficient time.
- 18 The Society believes that five years is about the right interval between assessments, and that it should not be more than six.

Misconceptions about the RAE

Report Recommendation 14: Efforts should be made at all levels to provide information about the workings of the RAE (see paragraphs 131-134).

Recommendation 15: The HEFCE should work to ensure that the sector understands the criteria used in making judgements in the RAE, and has confidence that these will be adhered to by the panels (see paragraph 135).

Question 14/15: Do you agree that further efforts are needed to ensure that the sector understands the RAE process, and particularly the criteria used by panels?

Recommendation 16: The quality of research should continue to be the sole basis for assessment in the RAE, but the HEFCE should continue to consider means to ensure that applicable research is fairly assessed (see paragraphs 146-147).

Question 16: Do you agree that quality of research should continue to be the sole basis for assessment in the RAE?

Recommendation 17: The RAE process should recognise that different disciplines have different characteristics of excellence, and panels should be able to make their judgements drawing on evidence provided specifically for their discipline. The criteria adopted should continue to be transparent (see paragraphs 148-151).

Question 17: Do you agree that RAE panels should be given more freedom to collect evidence specific to their discipline?

Recommendation 18: Where combinations of disciplines are judged to have given rise to a new discipline, and it has achieved maturity, then consideration should be given to creating a new unit of assessment (see paragraphs 152-154).

Question 18: Do you agree that a new unit of assessment should be considered only after a new discipline has both emerged and achieved maturity?

- 19 Many of the criticisms of the RAE are due to concerns that it may be penalising certain types of research – applied, collaborative or interdisciplinary – or encouraging unsatisfactory behaviour. While the studies that investigated these criticisms seem to suggest that the undesirable effects of the RAE have been small, it is very hard to disentangle the extent to which the RAE has contributed to changing practices. The RAE is, after all, part of a general demand for accountability and measurement. Nevertheless, the fact that many people appear to believe that the RAE has these undesirable consequences can result in a distortion of their behaviour, although this is difficult to prove, and evidence is largely anecdotal. It is important for the Funding Councils to make every effort to explain the details of the RAE and the safeguards built into its operation.
- 20 It has been suggested that problems of interdisciplinary research may occur within smaller UOAs. The Council may wish to revisit its data on the support of interdisciplinary research to see if there is any evidence of this and, if so, to consider whether any guidance needs to be given to Panel chairmen.
- 21 In some areas, the review and other studies have shown that remedial action is required. In the case of the treatment of applied research, for example, some researchers have clearly felt disadvantaged. The basis for the peer review should be the quality of research, and the assessment exercise should be capable of – and be seen to be capable of – assessing fairly all research along the basic to applied spectrum. It is, however, important that the panels are provided with firm evidence of quality, and this might include user take up or funding of the research.
- 22 Similarly the Society agrees that the peer review criteria for measuring excellence may well differ between different units of assessment, and confirming the actual arrangements should be a major responsibility of the review panel. The Council will need to monitor the situation to ensure that there is at least some consistency between neighbouring discipline areas. It would also be helpful if the chairs of groups of disciplines were to discuss their emerging arrangements.
- 23 The Society agrees that a new unit of assessment should only be considered when a discipline has achieved maturity, and even then only if there are strong reasons for not including it within an existing unit. The assessment process would anyway be unlikely to be satisfactory until the discipline had achieved maturity and was identifiable as a distinct entity at a reasonable number of institutions.

Other Activities and Funding Issues

Report Recommendation 19: The HEFCE should discontinue GR and should build on HEROBC to encourage higher education institutions to engage with industry (see paragraphs 155-163).

Question 19: Do you agree that the HEFCE should discontinue GR funding?

Recommendation 20: The funds provided by the HEFCE and the DTI for HEROBC should be increased substantially, and mechanisms established for the targeted distribution of these funds (see paragraphs 155-166).

Question 20: Do you agree that mechanisms should be established for the targeted distribution of HEROBC funds?

- 24 The Funding Council should only consider additional funding streams on an exceptional basis, and only then when there is a national need for specific action. Increasing interaction with users of research is one of these and HEROBC has achieved some success. Other funding schemes such as GR (Generic Research) could be subsumed within a new scheme if it also encompassed the areas covered by HEROBC (Higher Education Reach Out to Business and the Community) and the capability-development scheme suggested at recommendation 24 below.

Report Recommendation 21: Scholarship is an activity which is distinct from research and should be required of all academics who teach (see paragraphs 155-158 and 168-170).

Question 21a: Do you agree that scholarship is an activity that can be distinguished from research?

Question 21b: Do you agree that scholarship should be required of all academics who teach?

Recommendation 22: The HEFCE should make it clear that its funds for teaching include an element intended to enable staff to engage in scholarship (see paragraphs 155-158 and 168-170).

Question 22: Do you agree that funds for teaching are the right source of support for scholarship?

- 25 The Society agrees that restricted definition of “scholarship” in the consultation document, is not research, but is an important underpinning of all academic work – teaching research and other professional activities. Such scholarship should therefore be funded through the funding stream of the activity that it is required to support. Scholarship is an essential underpinning of HE teaching (indeed it is important to some extent at all levels of teaching), and should be resourced from teaching funds to provide adequate levels of non-class contact time, and library and Information and Communications Technologies (ICT) facilities. There is no reason for providing a separate fund, as suggested in the Dearing Report², for those departments that do not contribute to an institution’s Funding Council

research income. Scholarship is also associated with other professional activities such as consultancy, and this should be taken into account in any charges made for such activities.

Report Recommendation 23: The HEFCE should ensure that its funding mechanisms encourage research not only at international levels of excellence, but also at local, regional and national levels (see paragraphs 176-180).

Question 23: Do you agree that HEFCE funding should encourage research of local, regional and national importance, as well as research of international excellence?

Recommendation 24: The HEFCE should create a new stream of funding to supplement the existing researcher-driven and user-driven funds. This 'capability-development' funding should be provided to institutions in response to proposals for their use (see paragraphs 176-186).

Question 24: Do you agree that a new stream of capability development funding should be developed?

- 26 There is a danger of setting up new funds to cover all eventualities. This should only be done if it is not appropriate to modify existing arrangements. Any funding designed to encourage research and professional activity at local, regional and national levels needs to be closely related to the interaction with users, and the Funding Council should consider whether this could be included in a block "third" stream of funding, which also incorporates HEROBC.

Report Recommendation 25: The HEFCE should consider ways of modifying its funding method to remove incentives to recruit research staff and students at the expense of appropriate investment in research infrastructure (see paragraphs 187-190).

Question 25: Do you agree that the HEFCE should modify its funding method to remove incentives to recruit staff and students at the expense of infrastructure?

- 27 The volume component of the research funding formula needs to be considered in the light of incentives to use it for current/capital purposes. However, there is also a need to consider this in conjunction with the proposals for specific components for capital within QR and special capital arrangements (recommendations 32 and 33).

Report Recommendation 26: The HEFCE should no longer include an element which recognises income from charities in calculating the total funding for each subject, but should instead agree an explicit basis of support that reflects the contribution by charities to the direct costs associated with projects (see paragraphs 191-192).

Question 26: Do you agree that charitable income should be removed from the volume measure, and charitable grants should instead be supported on an agreed, explicit basis?

Recommendation 27: The HEFCE should consider whether it is necessary to amend the funding model to explicitly recognise that funding provided as EU grants and contracts currently does not cover all the costs associated with the project (see paragraphs 193-194).

Question 27: Should the HEFCE amend the funding model to take account of the basis on which EU funding is provided?

- 28 Research funding from the charities is an increasingly important component of university research, largely concentrated in the medical schools and the biological sciences. It is essential to come to a satisfactory arrangement for the overall funding of this research, before any changes are made to the HEFCE allocation with respect to their charity income. The Society believes that HEFCE and the other Funding Councils should continue their discussions with the charities over the total support required for charity-funded university research. This should, of course, take account of the overall contribution made to the direct cost of grants including infrastructure costs. However, before any final decision is taken it is important to await the outcome of the joint HEFCE/ Association of Medical Research Charities survey on the impact of charity funding on UK universities and the Funding Councils/OST Transparency Review.
- 29 With respect to the EU funding, the HEFCE should invite its parent Department to join with DTI to continue to put pressure on the EU to provide a greater proportion of the cost of Framework Programme project costs. In the light of the outcome of this, the Funding Council should consider how such research should be supported. However, this need not be entirely through the "research" stream; some of the activity may well be more applicable to a "third" stream of funding.

Report Recommendation 28: In general, institutions should charge prices which cover at least the full cost of research which they carry out under contract (see paragraph 195).

Question 28: Do you agree that institutions should be expected, in general, to charge prices which at least cover the cost of research they carry out under contract?

- 30 Except where the research is a genuine joint activity, with the university receiving significant other benefits or potential benefits, the institution should charge prices that cover the full cost of research that they carry out under contract. This should include an appropriate charge for capital resources, for underlying scholarship and background intellectual property rights (ipr).

Report Recommendation 29: Additional funds should be provided annually by the Government for research infrastructure, and these should be earmarked for this purpose when allocated by the HEFCE to institutions (see paragraph 196-197).

Question 29: Do you agree that additional capital funds should be provided annually by the Government for research infrastructure, and these should be earmarked for this purpose when allocated by the HEFCE to institutions?

Recommendation 30: The HEFCE should consider earmarking specifically for infrastructure investment a proportion of QR funding provided to institutions (see paragraphs 197-198).

Question 30: Do you agree with the principle that a proportion of QR should be earmarked specifically for infrastructure investment by the HEFCE?

- 31 It is important to increase the priority institutions give to maintaining and enhancing research infrastructure within universities and, as the review indicates, this is more than just maintaining, refurbishing and maintaining buildings and equipment; it also covers appropriate support staff skilled in the development and use of experimental techniques and specialised equipment.
- 32 Special schemes designed to make up an infrastructure shortfall, such as the Joint Infrastructure Fund, are not a satisfactory long-term solution. The Government's announcement of a different arrangement for the years post the Joint Infrastructure Fund (JIF) are to be welcomed, although there may be problems if, in the transition, this is entirely formula driven, with no account being taken of the state of existing buildings. This level of infrastructure funding should continue on an ongoing basis to enable the Funding Council to provide an earmarked capital grant to universities for major capital projects such as construction, refurbishment and maintenance of buildings and the purchase of very expensive equipment. This should then be supplemented by the identification of an infrastructure element within the QR block grant to cover the maintenance and development of facilities such as the purchase and maintenance of equipment, research usage of libraries and ICT and the necessary support staff. The arrangements should, however, remain flexible and allow virement, subject only to a satisfactory case being made. The Research Councils and other funders should also remain responsible for the purchase and maintenance of equipment and the necessary support staff associated with equipment required for their funded projects.

People Issues

Report Recommendation 31: The HEFCE should consider, initially through the human resources sub-group, the reasons behind the relative under-representation of women in the highest-rated departments, and whether other groups appear not to be realising their full research potential (see paragraphs 201-205).

Question 31: Do you agree that the HEFCE should explore further the reasons behind the relative under-representation of women in the highest-rated departments, and whether other groups appear not to be realising their full research potential?

- 33 The situation may be changing in that 25% of the Royal Society's University Research Fellows (URFs) are now women. The URFs are widely regarded as "fast track" appointments for some of the most promising academic researchers, and in the past some 80 to 90% of URFs have taken up posts in UK universities at the top end of the lecturer scale, senior lectureships/readerships and chairs. Furthermore, more proactively, the Society has established the Dorothy Hodgkin Fellowships (currently supporting 51 women) for researchers with no more than 4 years post doctoral experience, which provide particular support and flexible terms and conditions designed to be of particular benefit to those needing career breaks such as maternity leave, periods of part time working and child care costs for conference attendance. Nevertheless, the current position in higher education generally is far from satisfactory, and important background information will be forthcoming from the joint Wellcome/Research Councils project which is examining grant application behaviour and aims to provide evidence around four main questions: Who applies for research funding? Do university career structures affect grant application behaviour? Whether variations in workloads influence grant application behaviour? Do attitudes towards making applications differ between the sexes? The Funding Councils should also consider whether there are other diversity issues, such as ethnic balance, that need to be highlighted.

Report Recommendation 32: Submissions to the RAE should be allowed to include personal statements in respect of staff for whom, for whatever reason, a normal contribution to the standard form of submission is not appropriate (see paragraphs 206-207).

Question 32: Do you agree that personal statements should be permitted in a future RAE for those staff for whom a standard submission is not appropriate?

- 34 Such personal statements are an essential option as the system must be able to judge the quality of research portfolios, where there is a good reason for

the quantity being smaller than normal. However, it is important for such statements to provide firm evidence that can be evaluated by the panel.

Research Training

Report Recommendation 33: Research training should be the subject of a separate, but linked, assessment process to the RAE (see paragraphs 208-215).

Recommendation 34: Funding provided by the HEFCE for the training of research students should be calculated and allocated separately from the funding provided for research (see paragraphs 208-215).

Recommendation 35: The HEFCE, together with the Research Councils and other stakeholders such as industry and charities, should develop minimum requirements which departments would need to satisfy in order to be eligible for HEFCE funding for postgraduate research student training. The research assessment process should be extended to establish whether departments comply with these minimum standards (see paragraphs 208-218).

Question 33: Do you agree that research training should be the subject of a separate assessment process, linked to the RAE?

Question 34: Do you agree that funding for research students ought to be separated from funding for research?

Question 35: Do you agree that the HEFCE should develop and enforce minimum standards for the delivery of postgraduate research programmes?

- 35 Research training at a PhD level is one of the most important outputs from HE research and it is essential that the quality of the UK PhD education and training keeps in the vanguard of developing international standards. Furthermore, it is important to get the optimum balance between a PhD being an original contribution to research, research training, and a wider educational and training experience of value to the student's future career. The Society supports the proposals that the Funding Council, together with the Research Councils and other stakeholders, should develop minimum requirements for receiving Funding Council research training funds. This will require a separation of the HEFCE research training funds from the general research grant, but in order to ensure that this does not introduce a further burden on university staff, it should be based on the considerable amount of work already done by the Research Councils/AHRB on the quality of research training across the system

Report Recommendation 36: Collaborative arrangements should be established to enable units to meet all aspects of the postgraduate research training requirements, which might not be able to do so alone. The HEFCE should separately work up the practical arrangements to implement this recommendation (see paragraphs 208-218).

Question 36: Do you agree that the HEFCE should facilitate collaboration between institutions to support the delivery of postgraduate research programmes?

- 36 It is essential that the student is able to benefit from an appropriate environment, and in some subjects this may be difficult to achieve in small departments. There are a number of ways of enabling small departments to offer a satisfactory educational and training experience, by collaborations between departments, the development of research training consortia and, in some subjects, the use of what are effectively "research hotels" at national and international facilities.

Report Recommendation 37: The proposed capability-development stream of funding should be employed to ensure adequate PhD output in all subjects (see paragraphs 176-186 and 220-221).

Question 37a: Do you agree that there is a case for taking steps to ensure adequate PhD output in certain subjects?

Question 37b: Do you agree that the proposed capability development-funding stream is the appropriate mechanism for ensuring adequate PhD output?

- 37 HE Funding Council funds are to support basic capability and capacity. It is not clear that Funding Councils are best placed to determine the required numbers of PhD students in particular areas. Manpower planning is recognised to be fraught with difficulties, and it is probably best to try to influence student demand rather than institutional provision. The Research Councils and AHRB support the largest number of PhD students, although this is less than half the total, with important support from Government Departments, industry and charities. The announced increase in Research Council PhD student stipend to £9,000 should make a PhD course more attractive to those students in the areas covered by the Councils. Another important factor is the need for employers to publicise what benefits prospective students will achieve through further training for particular careers.

Report Recommendation 38: Institutions should be required to submit a staff development strategy as a precondition for the release of research funding (see paragraphs 222-228)

Question 38: Do you agree that institutions should be required to submit a staff development strategy as a condition for the receipt of research funding?

- 38 It is important for institutions to have satisfactory development strategies for all of the academic and non-academic staff and in connection with all of their responsibilities. There are particular problems with

contract research staff, which are being addressed though developments of the Research Concordat. It is important that the arrangements should strike a balance between the needs of the institution, and indeed the entire system, for a degree of flexibility and the needs of individuals for a satisfactory basis on which to develop their careers. There are also career development problems with non-clinical staff in clinical departments, and more generally for technicians. The proposed pre-condition is superficially attractive, but the Society does not believe that making such a submission a precondition for the receipt of funds is a desirable or indeed practical way of achieving the desired outcome.

This response has been endorsed by the Council of the Royal Society. It was prepared by a working group chaired

by Professor John Enderby FRS (Vice President of the Society and Physical Secretary). The other members were: Dr Paul Dyson (York), Dr Philip Green (Wellcome Trust), Professor James Scott FRS (Imperial College of Science, Technology and Medicine), Professor Peter Scott (Kingston University) and Professor Christopher Llewellyn Smith FRS (University College London), with support from Dr Keith Root (secretariat, Royal Society).

References

1. *Use of the policy factor in research funding*, Royal Society, December 1998
2. *Higher education in the learning society*, Report of the National Committee of Inquiry into Higher Education (Dearing Report) July 1997