RESEARCH EXCELLENCE FRAMEWORK- CONSULTATION

BACKGROUND

The Government has asked HEFCE to develop a new framework for research assessment and funding that makes greater use of quantitative information - 'metrics' - than the current arrangements. This will be introduced gradually between 2010 and 2014 following the 2008 Research Assessment Exercise (RAE). Some key elements in the new framework have already been decided; this publication presents initial proposals on how they should be delivered. In summary, this consultation covers the following issues:

- **Subject divisions**: within an overarching framework for the assessment and funding of research, there will be distinct approaches for the science-based disciplines (in this context, the sciences, technology, engineering and medicine with the exception of mathematics and statistics) and for the other disciplines. This publication proposes where the boundary should be drawn between these two groups and proposes a subdivision of science-based disciplines into six broad subject groups for assessment and funding purposes.
- **Assessment and funding for the science-based disciplines** will be driven by quantitative indicators. We will develop a new bibliometric indicator of research quality. This document builds on expert advice to set out our proposed approach to generating a quality profile using bibliometric data, and invites comments on this.
- **Assessment and funding for the other disciplines**: a new light touch peer review process informed by metrics will operate for the other disciplines (the arts, humanities, social sciences and mathematics and statistics) in 2013. We have not undertaken significant development work on this to date. This publication identifies some key issues and invites preliminary views on how we should approach these.
- **Range and use of quantitative indicators**: the new funding and assessment framework will also make use of indicators of research income and numbers of research students. This publication invites views on whether additional indicators should be used, for example to capture user value, and if so on what basis.
- **Role of the expert panels**: panels made up of eminent UK and international practising researchers in each of the proposed subject groups, together with some research users, will be convened to advise on the selection and use of indicators within the framework for all disciplines, and to conduct the light touch peer review process in non science-based disciplines. This document invites proposals for how their role should be defined within this context.
- **Next steps**: the paper identifies a number of areas for further work and sets out our proposed workplan and timetable for developing and introducing the new framework, including further consultations and a pilot exercise to help develop a method for producing bibliometric quality indicators.

- **Sector impact**: a key aim in developing the framework will be to reduce the burden on researchers and higher education institutions (HEIs) created by the current arrangements. We also aim for the framework to promote equal opportunities. This publication invites comments on where we need to pay particular attention to these issues in developing the framework and what more can be done.
- **Territorial coverage of the proposals**: this publication launches a HEFCE consultation on a new funding and assessment framework for England. The higher education funding councils for Wales and Scotland are conducting parallel consultations with the aim of developing with us a single framework for research quality assessment that could operate across the UK; they will bring forward their own proposals for research funding in due course. While Northern Ireland is also participating in the HEFCE consultation, it too will be developing its own proposals for research funding.
- **Responding to the consultations**: responses are invited by e-mail by 14 February 2008 from HEIs and all other interested bodies. HEIs in Scotland and Wales, and other stakeholders based in a particular territory within the UK, should respond directly to the appropriate funding council. HEIs in Northern Ireland are invited to reply to HEFCE and to send a copy of their reply to the Department for Employment and Learning.

RAS RESPONSES TO THE CONSULTATION

Consultation question 1a: Do you endorse our proposals for defining the broad group of science-based disciplines, and for dividing this into six main subject groups, in the context of our new approach to assessment and funding?

Despite indications that the process will be fine-tuned, to take into account the differences between various disciplines, we assume the rationale for using broad groups of subjects is to use a larger, albeit heterogeneous, sample, and thereby attempt to remove the vagaries of a metric-based system of assessment. We believe any system has to be sufficiently robust that it can be applied with confidence to each discipline alone.

If funding is aggregated across these broad groups the mechanism for rewarding excellence with funds will have low resolution. This will have unintended consequences for funding specific university departments.

Consultation question 1b: Are there issues in relation to specific disciplines within this framework that we should consider?

In subjects where there are very large projects, involving a significant fraction of the active researchers e.g. particle physics and astrophysics, removing self-citations will produce an extremely distorted view.

In the case of fast-paced fields, such as ICT, the journal culture is far less prevalent than in many other areas, with many papers appearing in conference proceedings. Importantly, in these areas, citations are less likely to reflect research excellence.

Consultation question 2a: Do you agree that bibliometric indicators produced on the basis that we propose can provide a robust quality indicator in the context of our framework?

Despite the generally positive Leiden Report we do not agree that it has yet been demonstrated bibliometric indicators can provide a robust indicator. There are several articles that question their effectiveness. For example, see e.g. F. P. Pijpers, A. & G., Dec. 2006. See also Lehman, Jackson & Lautrup, 2006 (Nature, 444, 1003-1004) on the reliability of commonly used methods for comparing citation records.

A key issue is the period covered by the assessment with periods longer than those used in RAEs usually being required to provide any measure of reliability.

Further issues that need to be considered:

(i) In many subjects the most cited publications are those that are themselves essentially databases i.e. catalogues. These are crucial tools for excellent research but do not necessarily represent high intellectual value themselves.

(ii) Review papers, although reflecting peer status at some level, are not a measure of research excellence per se (as opposed to fundamental contributions to the knowledge base of a field), yet usually attract 10-100x the normal citations and hence can skew statistics enormously.

(iii) Even within a discipline there can be a large difference in citation rates. It would be most unfortunate if a consequence of a metric-based assessment is to marginalise such areas.

(iv) Universities should be allowed to select the papers that are to be included in the assessment. This would prevent papers that might have appeared in refereed conference proceedings, but will not often be cited, being included in a bibliometric trawl (see also 1b). Otherwise, researchers will avoid publishing papers that are unlikely to receive large numbers of citations, at least within the assessment period, but which might, nonetheless, warrant being in the public domain. It is important any assessment process does not distort what is published. What is published is the responsibility of referees and editors.

Overall, it is felt unwise to attempt to refine flawed citation data in an attempt to produce a `robust' indicator. A much better approach would be to recognise the shortcomings of these data and require a panel of practitioners carrying out the `light touch' peer review, to take the limitations into account, across <u>all</u> subject areas.

Consultation question 2b: Are there particular issues of significance needing to be resolved that we have not highlighted?

Most are covered elsewhere.

In addition, there has to be concern about assessment of interdisciplinary research. If it is accepted that fine tuning is needed for each discipline then it is far from clear how you fine tune for interdisciplinary research. Is HEFCE proposing to have a finely tuned metric for each of the many different forms of interdisciplinary research? Some element of peer review seems necessary to fully accommodate interdisciplinary research.

Consultation question 3a: What are the key issues that we should consider in developing light touch peer review for the non science-based disciplines?

N/A

Consultation question 3b: What are the main options for the form and conduct of this review?

We see the proposed pilot exercise as being critical in assessing the reliability of the proposed REF. It should be carried out soon, as proposed, so that the outcome can be compared with the RAE2008. It needs to involve a wide range of universities and disciplines and the whole process needs to be informed by both disciple-based experts and experts in metric-based assessments.

It is, however, far from clear why the introduction of the REF should be on the fast timescale proposed. There needs to be sufficient time to ensure that a process is available that has the confidence of all communities.

Consultation question 4: Is there additional quantitative information that we should use in the assessment and funding framework to capture user value or the quality of applied research, or other key aspects of research excellence? Please be specific in terms of what the information is, what essential element of research it casts light on, how it may be found or collected, and where and how it might be used within the framework.

Assessment of Applied Research appears to be a serious problem. Income from industry, commerce and government organizations is a measure of input and only partially reflects on research quality. On the other hand, assessing outputs in terms of improved welfare of citizens, uptake of ideas by various organisations, or wealth creation is far more difficult. Some measures, such as royalties, products made under licence, and to some extent patents, can be used but without some peer review it is far from clear how robust these will be. These issues need to be carefully addressed in the pilot exercise.

Consultation question 5: Are our proposals for the role of expert panels workable within the framework? Are there other key issues on which we might take their advice?

Expert panels must include both discipline-based experts and experts in the use of metric-based assessments.

Consultation question 6: Are there significant implications for the burden on the sector of implementing our new framework that we have not identified? What more can we do to minimise the burden as we introduce the new arrangements?

The proposed system should be far less burdensome. However, this is not relevant if the process is not robust.

Consultation question 7: Do you consider that the proposals in this document are likely to have any negative impact on equal opportunities? What issues will we need to pay particular attention to?

A metrics-only system could have a negative impact on EO as universities may not enter early-career researchers if there is no way of taking their status into account.

Consultation question 8: Do you have any other comments about our proposals, which are not covered by the above questions?

HEFCE need to accept that if a robust metric-only process cannot be found then they should implement some form of peer-review that will be acceptable to the community. HEFCE should use the independent expert panels to advise on whether a metric-only process can be robust and be prepared to accept that advice.

Universities should not be asked to identify research active staff until the full methodology is available.

Published work, covering the assessment period, should be used for staff who are employed by the HEI at the census date.

It would have been useful if the research used as background to paragraphs 39-40 was fully referenced.