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Higher Education Funding Council for England





Research Excellence Framework

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David Sweeney

Director (Research, Innovation, Skills)

HEFCE

Outline

- The Policy Context & Principles
- REF Overview & History
- Bibliometrics
- User-Valued Research

Introduction: the policy context

- National policy and HEFCE research funding
- Principles of Research Assessment
- Overview of REF

National policy

Government policy:

- A strong and innovative national research base is essential to support national prosperity in a globalised knowledge based economy
- Need to strengthen links between undertaking research and developing new products and services
- (Science and innovation investment framework, 2004-14)

The logo for the Higher Education Funding Council for England (HEFCE), featuring the word "hefce" in a blue, lowercase, serif font.

HEFCE research funding

- HEFCE research grant is part of the dual support system – working together with parallel funding streams from other sources
- It is also one of several funding streams from HEFCE (including HEIF for example) which together support policy aims for HE to contribute to economic growth and innovation



HEFCE research funding (2)

Our grant for research is allocated to enable universities collectively to:

- maintain a research base of world leading quality across the full range of disciplines
- create a sustainable and flexible national baseline capacity which enables the sector to respond strategically to a changing external environment and on which research and other activity funded from other sources can build.



HEFCE research funding (3)

- Our funding creates the capacity for HEIs to undertake innovative research, including in new fields and opening new lines of enquiry – the potential to make connections across subjects with a technological, business and social focus is particularly important in this context.
- This must be fully reflected in our assessment and allocation processes.

HEFCE research funding (4)

Therefore we allocate our funding selectively to support high quality research of all kinds wherever this is found.

We also strive to avoid either:

- Micromanaging the system through targeted allocations or detailed incentives, **or**
- Too broad an approach creating undesired incentives, or not supporting important activity



Research assessment: principles

HEFCE undertakes research quality assessment:

- As an assurance mechanism
- To provide information and benchmarking for HEIs, research users and others
- As an essential element in our funding allocation process



REF: overview

REF is an integrated framework for funding and assessment within which we can support activity and create incentives through either or both of these elements

Its primary focus is still excellence, but

- In context of the policy aims above; and
- Always taking account of the breadth and diversity of research done in HE

REF: overview (2)

- REF is a work in progress: following previous consultations we have already moved some way from where we started
- REF is not only about basic research, nor is it only about bibliometrics. We are developing a range of assessment approaches which can be combined in different ways to fit particular subject fields and types of research

REF: overview (3)

We see REF as a further development of what we do now, not something completely new

- We aim to avoid unhelpful perturbations in funding
- We aim to build upon the lessons of RAE – including examples of good practice in RAE that we wish to carry forward into REF

REF: working with stakeholders

- We are developing REF in continuing consultation with partners and stakeholders – and have already heard and acted on views on some aspects
- We are committed to reducing the burden on HEIs, but we need to discuss how to achieve this without losing responsiveness to sector concerns

Directions

- We remain committed to supporting an excellent, diverse and innovative research base that responds to policy aims and user needs
- And in particular to supporting research that is both excellent and valued by users
- REF as it is developing offers us a range of approaches to bring this about.

Background: HEFCE research funding

HEFCE allocates £1.5 billion for research in England

- Under dual support, HEFCE funding supports curiosity driven research and underpins work funded by the research councils, NHS, charities and others
- A block grant to be spent at the discretion of the HEI
- Allocated selectively using measures of quality (RAE results) and volume



Background: the RAE

RAE was introduced in 1986 and the 2008 exercise is now in its final stages

RAE has had a strong positive impact:

- Showing that the block grant is well spent
- Driving up research quality
- A respected source of information about research quality

But there are negative impacts too and the exercise has arguably run its course in this form



Background: Reform of research assessment and funding

- 2006: DfES proposed moving to a metrics-based system of allocating research funding
- Following consultation, HEFCE was asked to develop proposals for a system based on:
 - a bibliometric indicator of quality, research income and research student data for the science-based subjects
 - light-touch peer review informed by metrics for the other subjects
- 2007-08: HEFCE consulted on proposals for the Research Excellence Framework (REF), and announced some changes in May 2008

The Research Excellence Framework (REF)

- A unified framework for research assessment and funding which accommodates differences between disciplines
- Robust research quality profiles for all subjects across the UK, benchmarked against international standards
- Emphasis on identifying and encouraging excellent research of all kinds
- Greater use of metrics than at present – including bibliometric indicators for all disciplines where these are meaningful
- Reduced burden on HEIs



Broad approach to assessment

- Assessment will be through:
 - Bibliometric indicators of quality or expert review of outputs (possibly a combination of these)
 - Other quantitative indicators
 - Supplementary qualitative information
- Which of these elements are employed, and the balance between them, will vary as appropriate to each subject
- For all subjects, expert panels will advise on the selection, interpretation and combination of the assessment components to produce overall quality profiles

Timetable

**Up to spring
2009**

Bibliometrics pilot and other development work

Mid-2009

Consult on all main features of the REF including operational details of the bibliometrics process

Autumn 2009

Decide on the main operational features of the framework

**Calendar year
2010**

Undertake bibliometrics exercise in appropriate subjects.
Establish expert panels for all subjects.
Consult on choice and use of assessment components for each subject group.

2011-12

Metrics begin to inform an element of HEFCE funding in some subjects.

2013

Undertake full assessment process for all subjects including light-touch peer review.

Bibliometrics

- Building on expert advice and consultation, we have identified the following key features:
 - Bibliometrics have the potential to provide robust proxy indicators of quality across a number of subjects
 - To be used alongside other data and information
 - Advice on interpretation from expert panels
 - Indicators to be based on citation rates per paper, benchmarked against worldwide norms for the field (and year and type of publication)
 - Results to be aggregated for substantial bodies of work; presented as a citation profile

The bibliometrics pilot

- The pilot aims to develop and test a number of issues:
 - Which disciplines? (All disciplines with at least moderate citation coverage are included in the pilot)
 - Which staff and papers should be included? Universal or selective coverage? Are papers credited to the researcher or the institution?
 - How to collect data – and the implications for institutions
 - Which citation database(s)?
 - Refining the methods of analysis – including normalisation fields and handling self citation
 - Thresholds for the citation profile
 - Interpretation and use by expert panels

Bibliometrics pilot institutions

Bangor University

University of Bath

University of Birmingham

Bournemouth University

University of Cambridge

University of Durham

University of East Anglia

University of Glasgow

Imperial College London

Institute of Cancer Research

University of Leeds

London Sch of Hygiene and Trop Med

University of Nottingham

University of Plymouth

University of Portsmouth

Queens University, Belfast

Robert Gordon University

Royal Veterinary College

University of Southampton

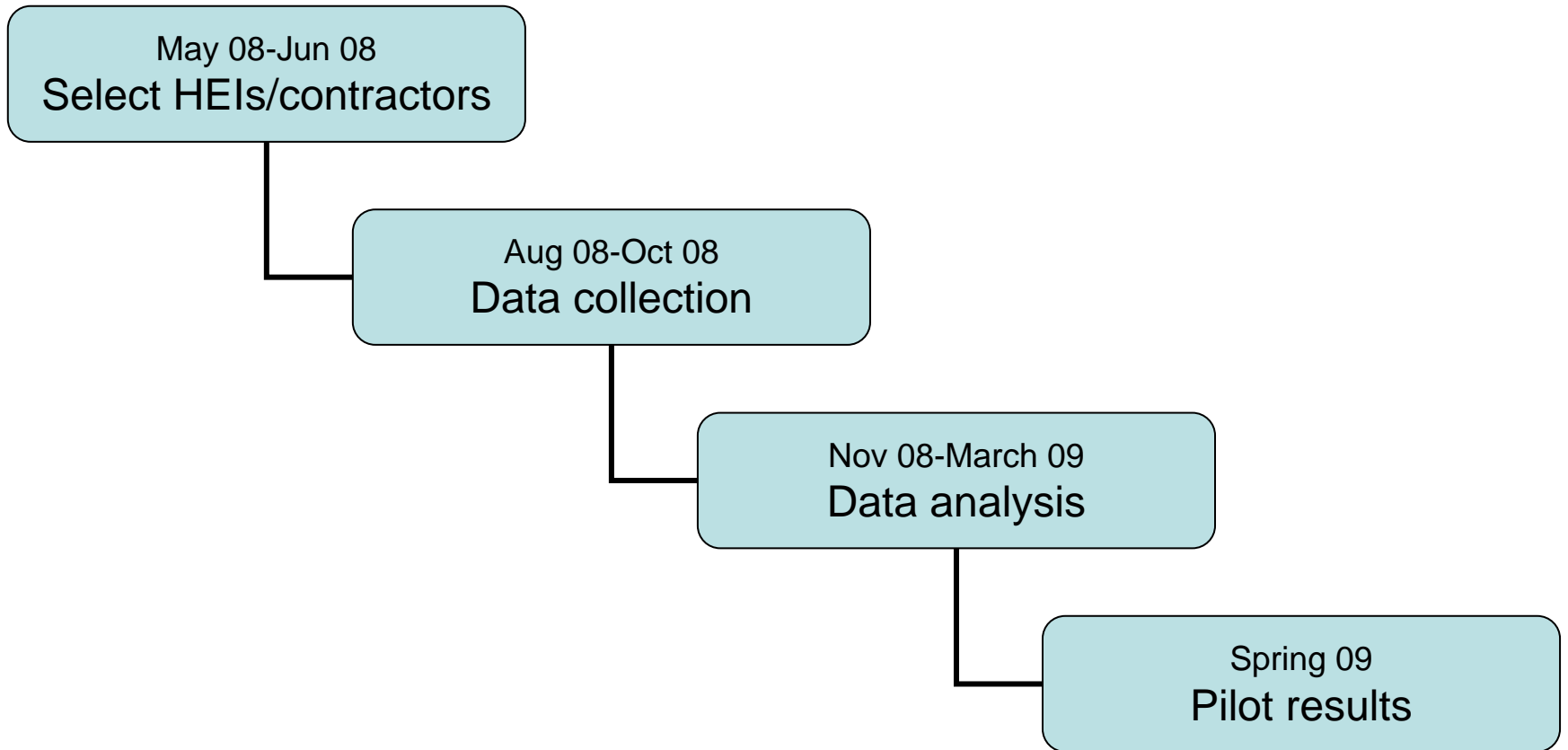
University of Stirling

University of Sussex

University College London

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The bibliometrics pilot - timetable



The pilot so far

- Evidence Ltd has been commissioned to run the pilot
- Mainly using the Web of Science data, but we will also explore SCOPUS
- The institutions were asked to provide data about all known research staff and outputs for the period Jan 2001 to Dec 2007 (in relevant disciplines)
- This will be supplemented by records identified in the Web of Science
- JISC project to produce case studies of pilot institutions' data collection systems
- We are currently tendering for a project to identify lessons learned by the pilot HEIs and disseminate these to the wider sector

Further information

- www.hefce.ac.uk/research/ref
- REF-NEWS mailing list
- Queries to ref@hefce.ac.uk
- Events to be organised by King's College London

Key issues for further work (1)

- Developing a robust method of producing citation indicators, and determining how and in which subjects they will be used
- Options for a lighter touch approach to peer review
- Defining a ‘common family’ of other types of indicators and supplementary information
- Challenge to define a common set of elements that can capture key aspects of quality for all types of research and across all disciplines, while minimising burden and complexity

Key issues for further work (2)

- How to combine metrics and expert input to form quality profiles
- How to group disciplines and configure expert panels
- The role and constitution of expert panels
- Reducing burden on the sector
- Promoting equality and diversity
- Detailed plans for phasing in and implementing the REF (including further consultations to determine which elements will be employed and the weightings between them in each subject group)

Progress so far

- Pilot of the bibliometrics process is underway
- Exploring how best to assess the quality of user-valued research
- Identifying available sources of data for potential metrics
- We are establishing a series of expert groups to advise on the key issues for the design of the REF, drawing in particular on the experience of the RAE
- Work has been commissioned to gather evidence about the accountability burden and equality and diversity implications of the move from RAE to the REF
- Informal discussions with a range of stakeholders on the key questions have begun

Light touch peer review

- Need to consider workload on institutions and on panels
- Selection of staff and outputs – are there any realistic alternatives?
- We will take advice from RAE panel members on the options for reducing the burden of reviewing outputs
- Opportunities for greater use of metrics

Metrics

- We aim to define a common family of metrics for the REF, that subject groups can draw on:
 - Bibliometrics
 - Research income
 - Research students
 - Esteem indicators?
 - User-valued research?
- We will take advice from expert groups on the choice and use of metrics, and seek to draw on existing sources of data as far as possible

User-valued research

- Consultation responses revealed a variety of views:
 - Should user-valued research be promoted through REF or other funding streams?
 - Some supported simple proxy metrics
 - Some supported more complex subject-specific metrics
 - Some felt alternatives to metrics are needed
- Workshop to identify how best to assess the quality of user-valued research within the framework

What is user valued research?

It is widely held that RAE does not deal well certain research activity which is valued by users but which is not recognised for excellence within the academic community in the usual way for its field.

This body of work resists definition in terms of “basic” and “applied”. It may equally well be either curiosity driven or specifically commissioned.

A typology

We suggest that UVR has one or more the following features:

- Undertaken using different approaches, or in a different environment, to most work in cognate fields (might include practice based research in the arts or STEM research done in a clinical or user setting?)
- Leading to no standard outputs, including non text or non-academic text (civil engineering or policy advice to government?)
- Published in traditional form but less cited by other researchers (certain journals in engineering?)

A typology (2)

In other words we seek a definition which

- Captures the full body of work that we need to consider, across all disciplines (and crucially including multi-disciplinary work)
- Fits constructively to the overall conceptual framework or REF and will help us to identify and assess excellence in fields and forms that we might otherwise miss

Framework for assessment (1)

Our starting points are:

- National policy imperatives
- Responses to last year's consultation – unanimous that there may be a problem but much less so on the solution
- Lessons to be learnt from the RAE experience – especially from the enhanced provision made by panels in 2008

Framework for assessment (2)

RAE defines excellence in terms of

- Significance
- Originality
- Rigour

In REF as in RAE we are ready to work with a broad definition of “significance” recognising the different ways in which the influence and impact of a piece of research may be seen and judged.

Originality and rigour are essential criteria for all research too.



Framework for assessment (3)

RAE assesses a body of research activity in terms of:

- Quality of outputs
- Research environment
- Esteem

We are willing to consider using indicators in REF that may capture

- How a research environment is supportive of UVR
- Evidence that specific work is esteemed for its quality by particular audiences

Tools and approaches for assessment

The toolkit:

- Bibliometric analysis
- Expert review of outputs
- Other available statistical indicators
- Submission of information by HEIs

All of these would be collected and interpreted with advice and input from expert panels as required.

Tools: bibliometric analysis

We aim to develop bibliometric approaches which

- Are accepted to be both robust and responsive to the full range of approaches within the disciplines covered
- Use appropriate “normalisation” tools so that outputs are compared to others with similar citation patterns

We are looking at possible evidence that user valued research is generally less cited by other academics and would welcome guidance on how to tackle this

Tools: expert review

We see a particular role for expert review:

- Where peer review is the primary approach, to ensure that UVR is assessed by experts against suitable criteria
- Where bibliometrics is the dominant approach, if necessary to assess outputs and activities for which citation indices are not a good tool
- And to advise on interpreting all other information

We welcome advice on which outputs and activities particularly require expert review

Tools: other statistics

- We already have access to a range of other statistical information (primarily HESA and HEBCI)
- We are reluctant to introduce additional returns but this is not absolutely ruled out
- Interpreting statistics can be challenging and mechanistic approaches may not be good enough (eg how far does industrial income indicate quality and how far that the work was expensive?)

Which indicators are promising in your field and how should we interpret these?

Tools: other information

- There is potential to collect a wealth of other information
- But this can be hard to interpret and we would expect to need expert input
- This has already been debated in several contexts (RAE, engineering, the Worton group in the arts)

What may be promising indicators that:

- Outputs and activities enjoy user esteem?
- A research environment is supportive?



Thank you for listening