

## Guidance on Research Output Reviewing and Assessment

Research reviewing is a crucial element of developing excellent research and excellent researchers. It is an important means of quality enhancement and professional development. Organised reviewing of research outputs has been occurring at the University since 2015. The impetus for this new guidance is in response to a shift to more distributed models of reviewing, whereby reviewer pools are expanding and more colleagues are becoming involved in the process for the first time.

### Pre-Submission versus Post-Publication Reviewing

Reviewing of research occurs at two main junctures in the research lifecycle – prior to submission to publications, where the aim is to provide specific advice on sharpening the work in question, and after publication, where the aim is to make an assessment of the final output and provide broader developmental feedback to the author. Pre-submission peer review is covered in separate guidance: [www.shu.ac.uk/~media/home/research/files/ethics/principles-of-good-research-practice-for-peer-reviewers.pdf](http://www.shu.ac.uk/~media/home/research/files/ethics/principles-of-good-research-practice-for-peer-reviewers.pdf). This document focuses on post-publication reviewing.

### Criteria

Assessment of research should be based on three criteria – originality, significance and rigour (OSR).

<b>Originality</b>	The extent to which the output makes an important and innovative contribution to understanding and knowledge in the field. Research outputs that demonstrate originality may do one or more of the following: produce and interpret new empirical findings or new material; engage with new and/or complex problems; develop innovative research methods, methodologies and analytical techniques; show imaginative and creative scope; provide new arguments and/or new forms of expression, formal innovations, interpretations and/or insights; collect and engage with novel types of data; and/or advance theory or the analysis of doctrine, policy or practice, and new forms of expression.
<b>Significance</b>	The extent to which the work has influenced, or has the capacity to influence, knowledge and scholarly thought, or the development and understanding of policy and/or practice.
<b>Rigour</b>	The extent to which the work demonstrates intellectual coherence and integrity, and adopts robust and appropriate concepts, analyses, sources, theories and/or methodologies.

Scoring of outputs should be on a four star scale, although half-point scoring between these is also common practice.

### Quality Star Levels

<b>4*</b>	Quality that is world-leading in terms of originality, significance and rigour
<b>3*</b>	Quality that is internationally excellent in terms of originality, significance and rigour but which falls short of the highest standards of excellence
<b>2*</b>	Quality that is recognised internationally in terms of originality, significance and rigour

<b>1*</b>	Quality that is recognised nationally in terms of originality, significance and rigour
<b>U</b>	Quality that falls below the standard of nationally recognised work. Or work which does not meet the published definition of research for the purposes of this assessment

'World-leading', 'internationally' and 'nationally' in this context refer to quality standards. They do not refer to the nature or geographical scope of particular subjects, nor to the locus of research, nor its place of dissemination.

This criteria is expanded below with more disciplinary reference. These sections are adapted from the REF 2021 Panel Criteria and Working Methods.

The Panel and Sub-Panel reports from REF 2021 also provide really informative feedback on the assessment of outputs. These can be found here: <https://2021.ref.ac.uk/publications-and-reports/end-of-exercise-reports/index.html>, under 'Main panel overview reports'. Please note there are output sections for both the main panel, and then, further down, for each UoA.

*Originality, Significance and Rigour Quality and Research Quality Standards for STEM*

In assessing outputs reviewers will look for evidence of the quality of the output in terms of its originality, significance and rigour, and will apply the generic definitions of the starred quality levels. Reviewers will look for evidence of some of the following types of characteristics of quality, as appropriate to each of the starred quality levels:

- Significant addition to knowledge and to the conceptual framework of the field
- Actual significance of the research
- The scale, challenge and logistical difficulty posed by the research
- The logical coherence of argument
- Contribution to theory-building
- Significance of work to advance knowledge, skills, understanding and scholarship in theory, practice, education, management and/or policy
- Applicability and significance to the relevant service users and research users
- Potential applicability for policy in, for example, health, healthcare, public health, food security, animal health or welfare

<b>4*</b>	<ul style="list-style-type: none"> <li>• Agenda-setting</li> <li>• Research that is leading or at the forefront of the research area</li> <li>• Great novelty in developing new thinking, new techniques or novel results</li> <li>• Major influence on a research theme or field</li> <li>• Developing new paradigms or fundamental new concepts for research</li> <li>• Major changes in policy or practice</li> <li>• Major influence on processes, production and management</li> <li>• Major influence on user engagement</li> </ul>
<b>3*</b>	<ul style="list-style-type: none"> <li>• Makes important contributions to the field at an international standard</li> <li>• Contributes important knowledge, ideas and techniques which are likely to have a lasting influence, but are not necessarily leading to fundamental new concepts</li> <li>• Significant changes to policies or practices</li> <li>• Significant influence on processes, production and management</li> <li>• Significant influence on user engagement</li> </ul>
<b>2*</b>	<ul style="list-style-type: none"> <li>• Provides useful knowledge and influences the field</li> <li>• Involves incremental advances, which might include new knowledge which conforms with existing ideas and paradigms, or model calculations using established techniques or approaches</li> <li>• Influence on policy or practice</li> <li>• Influence on processes, production and management</li> <li>• Influence on user engagement</li> </ul>
<b>1*</b>	<ul style="list-style-type: none"> <li>• Useful but unlikely to have more than a minor influence in the field</li> <li>• Minor influence on policy or practice</li> <li>• Minor influence on processes, production and management</li> <li>• Minor influence on user engagement</li> </ul>

*Originality, Significance and Rigour Quality and Research Quality Standards for Social Sciences*

In assessing outputs reviewers will look for evidence of the quality of the output in terms of its originality, significance and rigour, and will apply the generic definitions of the starred quality levels. Reviewers will look for evidence of some of the following types of characteristics of quality, as appropriate to each of the starred quality levels:

4*	<ul style="list-style-type: none"><li>• Outstandingly novel in developing concepts, paradigms, techniques or outcomes</li><li>• A primary or essential point of reference</li><li>• A formative influence on the intellectual agenda</li><li>• Application of exceptionally rigorous research design and techniques of investigation and analysis</li><li>• Generation of an exceptionally significant data set or research resource</li></ul>
3*	<ul style="list-style-type: none"><li>• Novel in developing concepts, paradigms, techniques or outcomes</li><li>• An important point of reference</li><li>• Contributing very important knowledge, ideas and techniques which are likely to have a lasting influence on the intellectual agenda</li><li>• Application of robust and appropriate research design and techniques of investigation and analysis</li><li>• Generation of a substantial data set or research resource</li></ul>
2*	<ul style="list-style-type: none"><li>• Providing important knowledge and the application of such knowledge</li><li>• Contributing to incremental and cumulative advances in knowledge</li><li>• Thorough and professional application of appropriate research design and techniques of investigation and analysis</li></ul>
1*	<ul style="list-style-type: none"><li>• Providing useful knowledge, but unlikely to have more than a minor influence</li><li>• An identifiable contribution to understanding, but largely framed by existing paradigms or traditions of enquiry</li><li>• Competent application of appropriate research design and techniques of investigation and analysis</li></ul>

*Originality, Significance and Rigour Quality and Research Quality Standards for the Arts and Humanities*

In assessing outputs reviewers will look for evidence of the quality of the output in terms of its originality, significance and rigour, and will apply the generic definitions of the starred quality levels. Reviewers will look for evidence of some of the following types of characteristics of quality, as appropriate to each of the starred quality levels:

4*	<ul style="list-style-type: none"><li>• A primary or essential point of reference</li><li>• Of profound influence</li><li>• Instrumental in developing new thinking, practices, paradigms, policies or audiences</li><li>• A major expansion of the range and the depth of research and its application</li><li>• Outstandingly novel, innovative and/or creative</li></ul>
3*	<ul style="list-style-type: none"><li>• An important point of reference</li><li>• Of considerable influence</li><li>• A catalyst for, or important contribution to, new thinking, practices, paradigms, policies or audiences</li><li>• A significant expansion of the range and the depth of research and its application</li><li>• Significantly novel or innovative or creative</li></ul>
2*	<ul style="list-style-type: none"><li>• A recognised point of reference</li><li>• Of some influence</li><li>• An incremental and cumulative advance on thinking, practices, paradigms, policies or audiences</li><li>• A useful contribution to the range or depth of research and its application</li></ul>
1*	<ul style="list-style-type: none"><li>• An identifiable contribution to understanding without advancing existing paradigms of enquiry or practice</li><li>• Of minor influence</li></ul>

## **Reviewing**

Reviewing is fundamentally subjective and every reviewer will make their best attempt to assess each output according to the criteria outlined above. Less experienced reviewers may seek guidance from more experienced ones within their Reading Group. Unit specific guidance, which may be appended to the bottom of this document, will also assist.

## **Feedback**

Where pre-submission reviewing is perhaps more actively critical and specific, focusing on practical improvements to that specific piece of work, feedback in post-publication reviews should have a different tone. As nothing can at that stage be changed about the work in question, comments should be framed around broader advice for improving future work. What was particularly good about the output? And what would strengthen a future piece of work of a similar type, perhaps with the ambition of moving it up to the next star rating?

Feedback should always refer back to the OSR criteria.

## **Moderation**

Authors should not receive comments and scores direct from reviewers - while reviewing may be devolved, Unit of Assessment Co-ordinators will always moderate it. This may involve calibration of scores, as well as ensuring qualitative feedback from multiple reviewers is internally consistent (potentially necessitating an additional review, if the initial ones are fundamentally contradictory).

All individual reviews are anonymous and considered 'workings'. Authors will receive a single score and, where appropriate, qualitative assessment, which will represent the formal opinion of the Unit of Assessment Reading Group.

## **Equality, Diversity and Inclusion (EDI)**

The University's research portfolio should be representative, from an EDI perspective, of its overall population. Broadly within the University this is the case – our REF 2021 submission was 47% female and 15% BME. And there was also no difference in profile between people submitted and outputs submitted. However barriers do still exist and awareness is needed of these issues in a research reviewing context.

Reviewing provides an excellent opportunity to monitor EDI in research, and this is done periodically ([www.shu.ac.uk/research/excellence/research-excellence-framework/equality-impact-assessment](http://www.shu.ac.uk/research/excellence/research-excellence-framework/equality-impact-assessment)).

All reviewers must have undertaken HR's equality and diversity and unconscious bias training, including the advanced managerial/decision-maker one.

From an individual reviewer's perspective, 'blind marking' is not practical when all outputs are already in the public domain and colleagues' research interests will be well known. However reviews must be performed solely on the content of the document in hand, with no other reference to the author, their other work, seniority or professional reputation.

Conflicts of interest should be declared if reviewers are asked to assess work of someone they have a close personal relationship with, which might not have been known by those allocating reviewers to outputs.

## **Use of Metrics/Journal Rankings**

Publication metrics (journal impact factors and other rankings) should absolutely not be used in the assessment of research. These tools may be useful for authors in deciding where they might publish, but they cannot be used as proxies for research quality. Research reviewing must be a fresh qualitative assessment of the specific output. The University has a Responsible Metrics policy and is a signatory of the San Francisco Declaration on Research Assessment (DORA), which both enshrine this principle.

## **Use of Data and GDPR**

The way the data collected in research reviewing and assessment can be used is tightly defined by GDPR and the University's staff privacy notice.

Research assessment data can be used for research assessment purposes, including the preparation and making of REF submissions. To this end Unit of Assessment Co-ordinators and the REF Management Group will use individual personal data (specifically scores linked to names). Beyond this though, all other data use will be anonymised/of aggregate scoring. Individual scores will not be shared or used systematically in other areas of university business, e.g. they will not be provided to promotion panels.

Individuals will only see their final/post-moderated scores and qualitative feedback, not the workings, nor who the reviewers were (which, due to the workings status, are both also outside the scope of FOI requests).

Individuals may present their own scores, e.g. on their PDRs, research plans or promotion applications; but these should be caveated that they are internal assessments.

## **Time Allocation**

There is an expectation that all staff with Significant Responsibility for Research should undertake post-publication reviewing. These individuals all have research time of  $\geq 20.8\%$  (incorporating RSA, where appropriate). Please refer to the University's REF Code of Practice for more details: [www.shu.ac.uk/research/excellence/research-excellence-framework/code-of-practice](http://www.shu.ac.uk/research/excellence/research-excellence-framework/code-of-practice). In addition, Early Career Researchers may also be integrated into Reading Groups, with appropriate supervision, as CPD.

Reviewing is an important collegial activity. If reviewing is distributed fairly, reviewers should only be asked to look at approximately 2-4 outputs per year (with some disciplinary variation).

## **Support**

The local Unit of Assessment Co-ordinator provides academic leadership on reviewing activity and will generally assign reviewers to outputs. The Reading Groups they assemble will be supported by an administrative contact from Research and Innovation Services, who will typically circulate outputs and compile scores. It is also the intention to try and manage as much of the process as possible within the Elements publication management system; this will evolve over time.

## **Unit Specific Guidance**

*(To be completed by UoA Co-ordinators, if appropriate)*