Assessment of research in the Accountability and Development Review (ADR) process

Purpose

This guidance provides information on supporting research planning, applications, delivery, impacts and outputs during the ADR process. Section A is intended to encourage and facilitate responsible assessment of research, including the use of bibliometrics, in the ADR process. Section B highlights institutional development opportunities in the areas of research funding and publication that may be useful to consider as part of ADR and Section C directs to further advice and support.

While the primary audience is ADR reviewers of academic staff in all subject areas, the information is relevant to all those undertaking and enabling research at Strathclyde.

A. GUIDE TO THE RESPONSIBLE ASSESSMENT OF RESEARCH

Institutional strategy

The University’s Strategic Plan contains Key Performance Indicators (KPIs) aimed at increasing our research quality, intensity, impact and international competitiveness. These relate to research income, PGR numbers and the proportion of research outputs in the 10% most cited in the relevant field. ADR discussions should cover how progress and plans for future activities and development support the achievement of the strategic goals.

Sector commitments

The University is signatory to various agreements and concordats which call for responsible research assessment practices, including the San Francisco Declaration on Research Assessment (DORA) and Agreement on Reforming Research Assessment (ARRA). These commit us to ensuring that the review of individual researchers and research teams for multiple purposes (including professional development review, allocation of funding, recruitment and promotion) recognises the diverse outputs, practices and activities that maximise the quality and impact of research. A key commitment is abandoning inappropriate use of bibliometrics, particularly the Journal Impact Factor and h-index as explained below.

Principles to guide responsible assessment

The Agreement on Reforming Research Assessment principles for research assessment criteria and processes (detailed in full below, with minor edits for clarity) provide a best practice guide to all forms of assessment, including individual review. These emphasise quality, impact, diversity, inclusiveness and collaboration. ADR reviewees, reviewers and signatories should familiarise themselves with these and seek to embed them in the review process.

1. Quality and impact

- Focus research assessment criteria on quality. Recognise the originality of ideas, professional research conduct, and results beyond the state-of-the-art. Recognise a variety of research missions, ranging from basic and frontier research to applied research.

- Quality implies that research is carried out through transparent research processes and methodologies and through research management allowing systematic re-use of previous results.

- Openness of research, and results that are verifiable and reproducible where applicable, strongly contribute to quality. Openness corresponds to early knowledge and data sharing, as well as open collaboration including societal engagement where appropriate.¹

- Assessment should rely on qualitative judgement for which peer review is central, supported by responsibly used quantitative indicators where appropriate.

¹ As outlined in the University's Research Data Management and Sharing (RDMS) Policy, the University's approach to assessing the suitability of data for sharing is that data should be 'as open as possible and as closed as necessary'. This means that data should be 'open' in order to foster reusability and to accelerate research, but 'closed' when required by legal, ethical, security and/or commercial constraints or if considered necessary to safeguard the safety and wellbeing of those involved in the research. Intellectual Property (IP) should be protected wherever possible.
• Recognise the contributions that advance knowledge and the (potential) impact of research results. Impact of research results implies effects of a scientific, technological, economic and/or societal nature that may develop in the short, medium or long-term, and that vary according to disciplines and research types.

2. Diversity, inclusiveness and collaboration

• Recognise the diversity of research activities and practices, with a diversity of outputs, and commend the early sharing and open collaboration where appropriate. Consider tasks like peer review, training, mentoring, supervision of PhD candidates and leadership roles, and, as appropriate, communication and interaction with society, entrepreneurship, innovation, and industry-academia cooperation.

• Also consider the full range of research outputs, such as publications, data, software, models, methods, theories, algorithms, protocols, workflows, exhibitions, strategies, policy contributions, etc., and recognise research behaviour underpinning open research practices such as early knowledge and data sharing as well as open collaboration with societal actors where appropriate.

• Recognise that researchers should not be expected to excel in all types of tasks and allow researchers to contribute to the definition of their research goals and aspirations.

• Use assessment criteria and processes that respect the variety of disciplines, research types as well as research career stages and that acknowledge multi-, inter-, and trans-disciplinary as well as inter-sectoral approaches, when applicable. Research assessment should be conducted commensurately to the specific nature of disciplines, research missions or other endeavours.

• Acknowledge and ascribe value to the diversity in research roles and careers, including technical and research-enabling roles. Value the skills (including open research skills), competences and merits of individual researchers, but also recognise team research and collaboration.

• Ensure gender equality, equal opportunities and inclusiveness (being mindful of unconscious bias and associated discriminatory behaviour). Consider gender balance, the gender dimension, and take into account diversity in the broader sense (e.g. racial or ethnic origin, sexual orientation, socio-economic, disability) in research teams at all levels, and in the content of research and innovation.

Appropriate use of bibliometrics in ADR

While the use of bibliometrics to inform the assessment of quality is not prohibited, care should be taken when selecting and interpreting these. Reliance on any single metric should be avoided, specifically exclusive use of author-based metrics (e.g. counting papers, patents, citations, grants etc.) and metrics relating to publication venue (e.g. Journal Impact Factor), format or language to assess the quality and/or impact of research. If appropriate, alternative bibliometrics should be used alongside or in place of traditional bibliometrics to understand academic impact (e.g. Altmetric and/or PlumX Metrics – available via Pure - which provide measures of online attention such as downloads, bookmarks, blog posts, comments and social media shares).

Consideration should be given to the robustness of the chosen metric(s), taking account of the accuracy and scope of the data, and the potential discriminatory effects of using them. For example, the h-index, which counts the number of publications meeting a threshold of citations, will disadvantage individuals whose personal circumstances (such as illness or career breaks) have impacted their publication record. Additionally, Journal Impact Factors are aggregated values calculated based on citations of the individual articles in a journal; given the variation of citation counts among articles, the Impact Factor is not a good indicator of the quality of any given article and should not be used simplistically as a proxy for this. An alternative would be to consider the number of outputs produced relative to the period of research activity and review the Field-Weighted Citation Impact (FWCI) for these.

In summary, ADR reviewees and reviewers are encouraged to:

• Discuss the specifics of the outputs/publications produced during the review period, with consideration of the appropriateness of output type and publication venue to the research undertaken. Ideally, a light-touch review of output content should be undertaken to provide assurance of the quality.

• Select two or more bibliometrics to support the assessment of output quality and academic impact.

• In the ADR narrative, elaborate on the choice of metrics and the interpretation of these, including mention of any individual circumstances which may have impacted them (e.g. career break, sickness absence etc).
What is Field-Weighted Citation Impact (FWCI)?
FWCI is the ratio of the total citations received by an output and the total citations expected based on the average of the subject field. It therefore compares citation performance against similar publications, determined by year, type and discipline. A FWCI of exactly 1.00 means that the output performs just as expected for the global average; more than 1.00 means that the output is more cited than expected according to the global average (e.g. 1.48 means 48% more cited than the expected average); and less than 1 means that the output is cited less than expected according to the global average (e.g. 0.91 means 9% less cited than the expected average).

Additional guidance
The following information is available on the RKES portal Publications page:

- Instructions for analysing the citation metrics for one or more researchers via SciVal.
- Instructions for using Altmetric and PlumX Metrics to understand online activity around scholarly outputs (e.g. number of downloads/page views, sharing via social media, news agency coverage, reference management software bookmarking).
- Practical tips for increasing citations, including guidance on making research Open Access, which should inform the development of personal publication strategies as appropriate.

B. INSTITUTIONAL DEVELOPMENT OPPORTUNITIES ON RESEARCH INCOME AND OUTPUTS
Continuous professional development is essential for all staff to be as successful as they can be in their current and future roles, especially in an environment such as research that is constantly evolving.

A range of staff development opportunities in the context of research funding and publication are offered institutionally through the Organisational & Staff Development Unit (OSDU), Research & Knowledge Exchange Services (RKES), the Strathclyde Library as well as through Faculty, Department and School activities.

The SPIRAL programme provides workshops, events and online resources in the context of:

- Grant & Fellowship Writing – from guidance on how to write a funding proposal as well as specific elements of an application to information on different funding calls; and
- Publishing Research – including guidance on writing in different research-related contexts, support in finding dedicated time to write and information on different elements of publication, from open access and data management to copyright and research integrity.

The University's Research Funding Peer Network as well as the online RKES Portal are further resources targeted specifically at research income and outputs, supporting staff at various career stages. Broader opportunities for professional development beyond taught courses and learning programmes should also be considered; these may include, for example, experiential learning within one’s role or learning from others in the form of mentoring and coaching.

Further guidance on how to have effective development conversations within the ADR process, specifically for research staff and those reviewing research staff, can be found here.

C. CONTACTS FOR ADVICE AND SUPPORT
Enquiries regarding the responsible assessment of research can be directed to:
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Enquiries regarding professional development opportunities can be directed to:
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