

Report of the DORA Working Group

17 October 2017

Contents

1. Membership of Working Group
2. Terms of reference
3. Introduction
4. Summary of recommendations
5. Appointments and promotion procedures
6. Annual review and PRDP
7. Implications of DORA for internal assessment of research proposals
8. Research Excellence Framework (REF)
9. Communications and engagement with academic staff
10. Concluding remarks
11. Appendices

1. Membership of Working Group

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2. Terms of Reference

- To examine the implications of DORA for the College's recruitment and promotion policies and procedures, and for its submission to the next REF
- To make recommendations on how the principles expressed in DORA can be embedded in the College's culture and working practices.

3. Introduction

3.1 The College signed the San Francisco Declaration on Research Assessment (DORA)¹ in February 2017 following discussion at Faculty/Business School Management Committees and endorsement by the Provost's Board. The declaration states that "There is a pressing need to improve the ways in which the output of scientific research is evaluated by funding agencies, academic institutions, and other parties", and to this end identifies the following recommended actions on the part of the research community:

- the need to eliminate undue reliance on the use of journal-based metrics, such as Journal Impact Factors, in funding, appointment, and promotion considerations.
- the need to assess research on its own merits rather than on the basis of the journal in which the research is published, and
- the need to capitalize on the opportunities provided by online publication (such as relaxing unnecessary limits on the number of words, figures, and references in articles, and exploring new indicators of significance and impact)².

3.2 The following considerations influenced the College's decision to sign DORA:

- Support of DORA would be consistent with the recommendations of the Richardson report on *The Application and Consistency of Approach in the Use of Performance Metrics*
- Furthermore, it was thought that the College should be leading by example by signalling that it assesses research on the basis of inherent quality rather than by where it is published (for example by using journal impact factor (JIF))
- The JIF is a crude parameter when used to measure the worth of individual papers because the distributions of citation counts for papers within any one journal are highly skewed (*i.e.* most papers have relatively few citations and only a minority (25-35%) have more citations than the impact factor)³
- Furthermore, it has been shown that journals can make mistakes (peer review is imperfect) and may well have different priorities (*e.g.* topicality) than universities or researchers
- Outsourcing research evaluation to journals creates perverse incentives (which DORA is directly trying to tackle).

3.3 A key recommendation of the of the Richardson report was that each department should develop academic staff profiles based on published information (quantitative and qualitative) covering all dimensions of academic responsibilities (teaching, research and administration). The profiles are under development by each faculty and the Working Group did not therefore examine these. However, when these profiles are introduced they should be consistent with the principles of DORA. Specifically, the profiles should recognise that the scientific content of a paper is much more important than publication metrics or the identity of the journal in which it was published. In assessing research the value and impact of all outputs (including datasets and software), in addition to research publications, should be considered.

3.4 In scoping out the task assigned to it the Working Group examined the following three areas where assessment of research plays a critical role in decision making: **recruitment and promotion, annual performance reviews/the PRDP process** and **REF**. These therefore provide the structure of the report that follows.

¹ <http://www.ascb.org/wp-content/uploads/2017/07/sfdora.pdf>

² The Working Group did not address the question of on-line publications and altmetrics, for example using social media. This is covered by the College's and HEFCE's Open Access policies (add link). For a review of the limitations associated with altmetrics see <http://www.hefce.ac.uk/pubs/rereports/year/2015/metricide/>

³ Lariviere, V. *et al.* A simple proposal for the publication of journal citation distributions. *Biorxiv* (2016). doi:10.1101/062109

4. Summary of recommendations

4.1 Recommendations relating to Human Resources policies and procedures

- That the College should be explicit about the criteria used to reach hiring, tenure, and promotion decisions, clearly highlighting that the scientific content of a paper is much more important than publication metrics or the identity of the journal in which it was published (para 5.8).
- That for the purposes of assessing research, the value and impact of *all* research outputs should be considered (including datasets and software), in addition to research publications. A broad range of impact measures, including qualitative indicators of research impact such as influence on policy and practice should be also taken into account where applicable (para 5.9).
- Appointments and promotion panels should be reminded that reductive publication metrics (citation counts, H-index etc) capture citation performance over a defined period (e.g. 5-10 years or more) after publication and that their use may not be appropriate for assessing “new” or early career investigators. In any case, use of the H-index to distinguish two or more researchers should always be context sensitive, particularly given that the calculation of this indicator provides no report on the variation that inevitably occurs within the citation distribution of the body of work of any individual. (para 5.10).
- We also make a number of specific recommendations relating to appointment and promotion forms and recruitment processes to ensure that the guidance provided is compatible with DORA (paras 5.11-5.12).
- That the practice currently used for Lecturer/Senior Lecturer appointments, where candidates are asked to select their 4 highest quality research outputs and to summarise the key findings, should be adopted in all academic appointments and promotion processes (para 5.11).
- That this policy be rolled out to academic departments, which are encouraged to ensure that JIFs are not used in academic, research fellow and postdoc recruitment processes, and that the HR office take the lead in implementation and ensuring that recruitment and promotion forms reflect this policy (para 5.11)
- All academic and research family job advertisements and PRDP forms should carry a DORA tag line (para 5.12).

4.2 Recommendations relating to research assessment

- Publicity and guidance literature for internal research schemes (President’s Awards, ICRFs, selection for external calls etc) should include the DORA tag-line and remind applicants that they should not include JIFs in their proposals (para 7.2).
- To ensure consistency with DORA we recommend that REF managers and HoDs be reminded of the College’s and HEFCE’s support for the declaration, and that they should not place undue reliance on JIFs and other journal rankings in selecting outputs for submission to REF (paras 6.4 and 8.3).

4.3 Recommendations regarding embedding DORA within the College culture

- To foster the culture change needed to fully implement DORA it is suggested that the College consult with a wide range of staff and students, including research assistants, research fellows and PhD students, on the issues addressed in this report (para 9.2).
- To communicate the College’s support for DORA to the broader academic community we propose that it hosts a national workshop on best practice in the responsible use of research metrics (para 9.3-9.5).

5. Appointments and promotions procedures

5.1 The group reviewed the following forms and guidance notes:

- Application for promotion form
- Promotions – Guidance on criteria
- Application form for Lecturers and Senior Lecturers
- Application form Readers and Professors

5.2 **Promotions form.** While the promotions guidance for Senior Lecturer, Reader, Associate Professor and Professor made no reference to journal impact metrics, that for Professors of the Practice referred to '*contributions to research papers that appear in high impact journals or in conference proceedings (page 8 of the guidance)*'. The group discussed more appropriate wording that would be consistent with the principles of DORA and suggested '*Evidence of contributions to high quality and impactful research*' or similar wording replace this. Furthermore, we suggest that to avoid misinterpretation, 'impactful' should be clearly defined as 'research that makes a significant contribution to the field and/or has impact beyond the immediate field of research'.

5.3 **Application form (L, SL).** The group noted that the form did not ask for journal based metrics. The information on publications sought from applicants includes a short paragraph explaining the key points of four selected papers and why they are important, which is consistent with DORA and offers an excellent and concise approach to assessing research quality and the vision of the candidate for their research. We suggest that a slight change in emphasis of the wording would be appropriate – the use of 'high quality and impactful research' rather than 'best papers', again to avoid misinterpretation. We also recommend the inclusion of a strap-line referring to the College's support for DORA on the application form.

5.4 **Application form (Chairs and Readers)⁴.** It is recommended that this form should also include the DORA strap-line, request details of 'high quality and impactful research' as for L/SL applications, and provide clear guidance that that the scientific content of a paper is more important than publication metrics or the identity of the journal in which it is published.

5.5 The Working Group is concerned that in job advertisements, which are usually handled at a department level, reference is often made to high impact or internationally recognised journals. The group recommended that all academic job ads and job descriptions refer to the College's signature of DORA as part of the College strap-line, with a web link and short explanation, which would help promote and instil the principles of DORA throughout the recruitment process.

5.6 It was recommended that Faculty Deans be contacted to disseminate this recommendation via FMCs and HoDs. To assist with implementation the College Consuls should be asked to remind recruitment and promotion panels of the College's support for DORA.

5.7 The group thought it important to make a positive recommendation on how the College *should* assess research in appointments and promotions decisions. We recommend that the approach used in the Lecturers/Senior Lecturers application form be adopted consistently across all recruitment and promotion processes. This asks candidates to select their four highest quality publications and to summarise the papers' key findings and the significance of the contribution to the field in question. Such an approach allows appointment panels to assess candidates' vision for their research and fit with the department's/Division's research strategy. We also

⁴ The group noted that the Chair/Reader application form was considerably shorter than the L /SL form, presumably because this level of appointment is handled centrally within the College and the attached CV provides the required information. While noting that it is outside of the group's immediate terms of reference, we would encourage use of a more detailed form, such as that used for L/SL appointments (which asks candidates to identify and describe their most important contributions. This would ensure consistency, help to reduce unconscious bias in shortlisting decisions, and create a level playing field for candidates.

recommend that departments be encouraged to be innovative in developing alternative methods of assessment at the shortlisting stage, e.g. use of a biographical sketch that gives a concise account of research, teaching and other activities (along the lines of the UMC Utrecht proposals⁵).

Recommendations relating to appointments and promotions procedures

- 5.8 That the College should be explicit about the criteria used to reach hiring, tenure, and promotion decisions, clearly highlighting that the scientific content of a paper is much more important than publication metrics or the identity of the journal in which it was published.
- 5.9 That for the purposes of assessing research, the value and impact of all research outputs should be considered (including datasets and software) in addition to research publications, and a broad range of impact measures including qualitative indicators of research impact, such as influence on policy and practice should be taken into account.
- 5.10 Appointments and promotion panels should be reminded that reductive publication metrics (citations, H-index etc) capture success over a defined period (e.g. 5-10 years or more) after publication and that their use may not be appropriate for assessing “new” or early career investigators. Use of the H-index to distinguish two or more researchers should be context sensitive, particularly given that the calculation of this indicator provides no report on the variation that inevitably occurs within the citation distribution of the body of work of any individual.
- 5.11 Specific recommendations relating to appointment and promotion forms are:
- That the Professors of the Practice promotions form be amended as discussed in 5.2 above
 - That the L/SL application form wording be amended to refer to ‘high quality and impactful research’ rather than ‘best papers’.
 - That the Chairs and Readers application form should use the same format as that for Lecturers/Senior Lecturers.
 - That the practice currently used for Lecturer/Senior Lecturer appointments, where candidates are asked to select their 4 highest quality research outputs and to summarise the key findings, should be adopted in all academic appointments and promotion processes (an approach that could also be adopted in the evaluation of teaching, mentoring and other activities).
 - That this policy be rolled out to academic departments, which are encouraged to ensure that JIFs are not used in academic, research fellow and postdoc recruitment processes, and that the HR office take the lead in implementation and ensuring that recruitment and promotion forms reflect this policy.
- 5.12 That all academic and research family job advertisements carry the DORA tagline with the following wording:
- “The College is a proud signatory to the San-Francisco Declaration on Research Assessment (DORA), which means that in hiring and promotion decisions we will evaluate applicants on the quality of their work, not the impact factor of the journal where it is published. More information is available at <https://www.imperial.ac.uk/research-and-innovation/about-imperial-research/research-evaluation/>. “*
- 5.13 Responsibility for implementation of the above recommendations lies with the Human Resources Office (Deputy Director of HR) and the Academic Promotions

⁵ <https://www.nature.com/news/fewer-numbers-better-science-1.20858>

6. Annual review and PRDP

- 6.1 The Working Group notes that, following the recommendations of the Richardson report, an 'Academic Profile' covering all dimensions of academic work, will be collected and used alongside the PRDP form. While there may be some variation between faculties in terms of detailed implementation, the intention is that the Academic Profile and PRDP forms will be complementary. Where Academic Profiles are used they need to be consistent with DORA.
- 6.2 The group agrees that there are no problems with the current wording on the PRDP form in terms of consistency with DORA. However, the PRDP provides an excellent opportunity to instil the principles embodied in DORA in the College's annual appraisal practices, and it is therefore recommended that the DORA tag-line also be added to the academic PRDP form.
- 6.3 The Group further recommends that, in making reference to DORA the PRDP guidance should emphasise that this is particularly important as the College approaches the REF exercise, where staff will be selecting publications for submission. This is an important element of the cultural change needed within College to bring working practices into line with the principles of DORA.

Recommendations relating to PRDP Process

- 6.4 The DORA tag-line should be integrated into the academic PRDP form in the same way as equality, diversity and inclusion policies and support for Athena Swan.
- 6.5 The academic PRDP guidance should emphasise that, if managers/heads of department are reviewing PRDPs in the context of REF submissions, particular care is needed in selecting publications for submission, and, as noted in para 5.8 above, this should be based on the quality of the research and not the impact factor of the journal where it is published.

7. Implications of DORA for internal assessment of research proposals

- 7.1 The Working Group noted that JIF's are sometimes referred to in proposals submitted to internal funding calls and award schemes, including the Research Excellent awards, President's PhD Scholarships, the Imperial College Research Fellowships (ICRF) and internally managed research funding schemes.
- 7.2 It is recommended that the publicity and guidance literature for such schemes also include the DORA tag-line and remind applicants that they should not place undue reliance on JIFs in their proposals.
- 7.3 Responsibility for implementation of the above recommendations lies with the **Vice Provost (Research) and the Research Office**.

8. Research Excellence Framework (REF)

- 8.1 The guidelines for REF are still being developed by HEFCE/Research England but it is clear that HEFCE fully supports the principles contained in DORA (they are a signatory) and it is likely that decisions on the detailed REF assessment processes will reflect this.
- 8.2 The key consideration for the College therefore relates to how it manages internal processes in developing its REF submission, and specifically the selection of research outputs.

Recommendation

- 8.3 To ensure consistency with DORA we recommend that REF managers and HoDs be reminded of the College's and HEFCE's support for the declaration, and that they should not place undue reliance on JIFs and other journal rankings in selecting outputs for submission to REF.
- 8.4 Responsibility for implementation of this recommendation lies with the **Vice Provost (Research) and the Strategic Planning Office**.

9. Communications and engagement with academic staff

- 9.1 The Richardson report has been extremely valuable in guiding discussions of the Working Group on the use of metrics in research assessment. The Group noted that the Richardson panel had surveyed academic staff on their views regarding the use of metrics in evaluating research, and that postdocs, fellows and research students were outside that panel's terms of reference.
- 9.2 The Working Group also recognises that there will be a range of views on how best to assess research, and that its members might not be wholly representative of the wider academic community across the College. **In order to foster the culture change needed to fully implement DORA it is therefore suggested that the College consult with a wider range of staff and students, including research assistants, research fellows and PhD students, all of whom would be affected by the issues addressed here.** Any survey should be conducted in accordance with accepted social science methodology to ensure that the results are reliable and informative.
- 9.3 Lead responsibility for the proposed survey should lie with the **Human Resources office**.
- 9.4 **DORA Workshop: To communicate the College's support for DORA to the academic community the Panel proposes that a workshop be held on best practice in the responsible use of research metrics.** This could involve speakers from other UK universities to learn about their experience of implementing DORA, and from institutions that have adopted other, related principles (e.g. the Leiden Manifesto⁶). The aim would be to share information about how to do research evaluation well; for example, how best to triage large volumes of applications in initial shortlisting for interview without undue reliance on JIFs. It would also provide an opportunity to explore the scope and limitations of altmetrics (see para 3, footnote 2).
- 9.5 Such a workshop would help to get the message out across the campus, stimulate discussion and showcase Imperial's determination to be a leading light in this area, nationally and internationally. If convenient the timing of the workshop could coincide with the re-launch of DORA in the US next Spring.
- 9.6 The **Research Office and HR Office should jointly take responsibility** for organising the workshop.

10. Concluding remarks

- 10.1 The Panel would like to thank Professor Nick Jennings for charging it with the task of examining how to implement DORA. In undertaking this task the Working Group has been conscious that the more challenging aspect of implementing the principles enshrined in DORA will be changing behaviours that have become embedded in academic life, specifically in relation to the use of journal based metrics as a proxy for evaluating research quality. We believe that the recommendations contained in this report will be an essential first step to changing this culture, but they will require continued monitoring and vigilance on the part of College senior management.
- 10.2 As noted above, there is considerable scope for innovative approaches to be developed, along the lines of those advocated in the Utrecht proposals⁷, and we therefore want to leave the door open to future improvements in research assessment and evaluation processes. The proposed DORA workshop will provide an excellent opportunity to explore these matters.

⁶ <http://www.leidenmanifesto.org/>

⁷ See footnote 5 page 5

Appendices

1. iRecruitment application form for Lecturers and Senior lecturers
2. iRecruitment application form for Chairs and Readers

These can be found at the following link:

<http://www.imperial.ac.uk/job-applicants/opportunities/forms/>

3. Application for Promotion form

This can be found at the following link:

<http://www.imperial.ac.uk/human-resources/working-at-imperial/career-development-opportunities/academic-promotions/>