University of Groningen

Responsible Research Assessment Principles

About the principles

The University of Groningen (UG)[1] is committed to building a culture of collaboration and creating a research environment founded on academic freedom, integrity, inclusivity and transparency. We recognize that these core values should also guide the use of research metrics in performance assessment, quality assurance and benchmarking.

The UG Responsible Research Assessment Principles are a distillation of best practices in metrics-based research assessment. They have been created as a guide to the appropriate use of research metrics at the UG and to promote best practices when conducting any form of research assessment, especially when it concerns and affects individual researchers.

They are intended for all UG members, including both academic and support staff within faculties and in central departments who are involved in the assessment of researchers, research proposals or research units. The principles outline the fundamentals of responsible research assessment for any UG member involved in its practice.

The principles outlined below are aligned with the Leiden Manifesto, the San Francisco Declaration on Research Assessment (DORA), the Agreement on Reforming Research Assessment (CoARA), the Position paper of the national programme for Recognition & Rewards, the Strategy Evaluation Protocol (SEP) 2021-2027, the Groningen Research Assessment Protocol (GRAP) 2021 and the University of Groningen Strategic Plan 2021-2026.

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The initiative to create this document was coordinated by the Research & Impact Cluster of University Services and Research Intelligence Services (RISe). They were assisted by the University Committee for Academic Practice (UCW), the UG Expert Network for Research Analytics (ENRA), HR, the Young Academy Groningen (YAG) and the Recognition and Rewards Workgroup, which have all provided valuable input and feedback.

RISe provides expert advice, training and services to help the UG academic community demonstrate its scholarly impact in grant applications and promotional portfolios. RISe also conducts research impact analysis at research group, faculty and institutional level for benchmarking, ranking or strategic purposes, as well as for the preparation of reports and figures required by the Standard Evaluation Protocol (SEP).

For more information about this document or research intelligence in general, contact RISe at rise@rug.nl.

[1] Where the University of Groningen is mentioned, this includes the University Medical Center Groningen (UMCG).

Responsible Research Assessment Principles

1) Use research performance metrics to support, not replace qualitative or peer assessment

Research metrics are an important part of our research-support toolkit and their responsible use can lead to more impartial assessment outcomes. Where appropriate metrics are available, their interpretation will be guided by expert peer review and used to inform narratives and qualitative assessment. This is aligned with the UG's goal to base governance and strategic development on evidence-based decisions by balancing quantitative and qualitative analysis.

2) Measure performance against the mission of the research institute[2] or the specific aims and ambitions of the group or researcher

The University of Groningen Strategic Plan 2021-2026 strives to foster high-quality research for the benefit of society and science by promoting collaboration through internationalization and interdisciplinarity, as well as by supporting talent and increasing research impact. We recognize that within this strategic framework, researchers and research units have their own uniquely defined goals and missions. Assessment should be geared towards the evaluation of progress based on these goals and missions and be used as a tool to reflect on institute, faculty and university strategy.[3]

3) Keep research assessment data and analysis open and transparent

Information on research-assessment methodologies, criteria and the data[4] used will be made available to those being assessed to ensure transparency and allow them to verify the analysis. In this process, we will strive to strike a balance between transparency and privacy, especially when it comes to individual research performance data that is not publicly available. The citation and publication tools used in research assessment[5] will continue to be made available university-wide. Anyone who would like a better understanding of the data and tools used may contact the UG's Research Intelligence Services (RISe).

4) Provide information on the strengths and weaknesses of metrics and select metrics that are fit for purpose

RISe experts work with research units, research managers, policy officers and researchers to select metrics that are relevant and fit for purpose, whether the goal is to support research-unit assessment, career development or grant applications. RISe will also supply information on the advantages and disadvantages of potential metrics and methodologies, as well as the

[2] 'Research institute', as defined in the SEP, must have its own clearly defined strategy and be sufficiently large; established for at least three years; and be known as an entity in its own right, both within and outside the UG.
[3] This principle is in alignment with the national guidelines set out in the Standard Evaluation Protocol (SEP) 2021-2027 and our own Groningen Research Assessment Protocol (GRAP).
[4] Including but not limited to publications, citation data, research applications and awards, as well as other evidence of research activity.
[5] Including the Pure research database, SciVal, Incites, exploratory tools such Altmetric Explorer and others.

questions and use cases for which they may be appropriate.[6] Analysis is conducted as an open process in which we strive to further develop metrics and methods as well as gain insights from feedback.

5) Be mindful of the nature of different disciplines and the variation in research practices

Research metrics are not equally informative for all subdisciplines, questions or career paths. This may vary depending on publication and citation practices, type of research output, research goals, level of collaboration and interdisciplinarity, publication language, etc. To mitigate the misuse of research metrics, all those conducting research assessment at the UG should abide by the measures listed below:

- Account for differences when comparing research output from different subdisciplines by using metrics that are normalized for field, date of publication and/or output type.
- Avoid statistical bias by checking for outliers and inspecting frequency distributions, rather than using simple averages or proportions. A lack of data should not be taken as an indicator in and of itself, nor be used to make decisions on the viability or performance of a unit or individual.
- It should be recognized that citation databases and tools currently have better coverage of journal articles published in English and may not be appropriate for disciplines or individuals that predominantly publish monographs or other forms of research output.
- Research conducted in large teams, and especially that arising from international collaboration, will receive higher citation counts. Therefore, the same standards cannot apply to disciplines where researchers tend to work alone or in very small groups.
- The research output of early career researchers should be assessed by accounting for years active in academia.

6) When assessing researchers, consider individual differences and the highlights of their entire portfolio of activities and contributions

The Position paper of the national programme for Recognition & Rewards proposes a more balanced assessment of researchers by recognizing that they can make important contributions in different domains, including education, research, societal impact, leadership and patient care. In addition, researchers can contribute to Open Science practices by publishing in Open Access journals, FAIR sharing of research data and engaging in citizen science, preregistration or open peer review.

A researcher’s decision to focus on one of these possible dimensions will likely impact the other aspects, and one individual cannot reasonably be expected to excel across all dimensions. Both individual and team performance should be assessed, and quality should be emphasized over quantity.

[6] To increase awareness, RISe will prepare a DORA-proof metrics toolkit for research-unit and individual-level assessment that will consist of a list of relevant indicators, their advantages, disadvantages and potential usage.

7) Avoid misplaced concreteness and false precision

There is a shift away from the 'quick and dirty' assessment of research in which decision-making is based on simplified metrics such as the h-index or Journal Impact Factors. Best practices are:

- Consider whether a metric is necessary at all and whether it is helpful in informing qualitative assessment. If using metrics, use more than one to ensure robust, evidence-based decision-making.
- Use normalized metrics to account for differences in field, date and output type. Avoid false precision, such as by ranking on the basis of insignificant decimal places.
- Use article-level metrics to assess the impact of research articles or individuals. Do not use journal-based metrics as a surrogate measure of the quality of articles or in hiring and promotion decisions.
- If research metrics are used in recruitment, promotion, nominations or other processes, clearly outline this in the application documents.

8) Avoid research assessment practices which introduce bias

Research performance may be affected by different career paths or research goals (e.g. interdisciplinary, fundamental or applied research). Both qualitative and quantitative assessment may be impacted by gender, race, ethnicity, career stage, discipline and affiliated institution. The use of normalized metrics in combination with qualitative assessment may be helpful both in the formation of more equitable judgements and in leading to improved accessibility for diverse researchers and fields of research.

The use of metrics that are known to have a possible negative impact on equality should be mitigated. If metrics are used, those who use them must be sufficiently informed about possible biases. We recommend the use of a combination of metrics, as outlined in Principle 7, in order to reduce the inherent biases of each individual metric. To ensure this, we advise expert review by the UG's Research Intelligence Services (RISe), as set out in Principle 9.

9) Ensure that metrics are used in a responsible and expert manner at the UG

Research assessment methods are evolving and becoming increasingly complex. This gives us more sophisticated metrics that can better describe what is being measured by accounting for differences between disciplines, missions and questions. However, as methods become more complex, it becomes more difficult to keep track of them and they require expert application. While RISe provides training to all those who are involved in research performance assessment at the UG and ensures continued knowledge exchange through its ENRA network,[7] it is strongly advised that RISe be involved in research performance assessment processes whenever possible. *At the very least, when employing research metrics for comparative evaluation, peer review by a member of RISe is mandatory to ensure quality and robustness*.

[7] UG Expertise Network on Research Analytics.

Implementation and revision of the principles

The Talent, Funding and Quality domain at the Research & Impact Cluster of University Services, Research Intelligence Services (RISe) and the ENRA network (UG Expertise Network on Research Analytics) play an important role in ensuring that research assessment practices at the UG are aligned with the principles laid out in this document. They will pave the way for their practical elaboration in diverse UG contexts and in close collaboration with stakeholders.

Dissemination

The principles are to be made widely available. They will be attached in full form as well as in the form of a one-pager with guidelines, as an appendix to the GRAP, the UG Recruitment Guide, R&O forms and the UG Committee for Recognition and Rewards document on the assessment of research quality. In addition, they will be part of the **'DORA-proof' metrics toolkit for research assessment** that will be created by RISe and disseminated to dedicated RRI providers of ENRA and all those involved in the practice of research assessment. To raise awareness, RISe will organize regular webinars on responsible research assessment. A presentation of the principles should also be added to the programme of PhD intro days.

Revision and review

Members of the RISe team from the Research & Impact Cluster of University Services and from the University Library are fully dedicated to the responsible practice of research analytics. We follow the latest developments and undergo additional training when appropriate, in order to best serve the research community of the University of Groningen. Furthermore, the RISe team participates in relevant national and international working groups to ensure that research analytics practices at the University of Groningen remain at the forefront of the latest research intelligence findings.

This document will be periodically reviewed by relevant stakeholders in order to ensure that it remains at the necessary standard and that it is in the best interests of achieving research excellence. With the rise of Open Science and great leaps in technology, new tools and metrics are continually developed and are regularly scrutinized by the RISe team. In addition, as research missions and systems of assessment change, so should the research metrics and methods employed.

Using research information systems and databases

Obtaining data from research information systems[8] and converting it into responsible research intelligence requires specialist expertise. RISe and many ENRA members are dedicated support staff and are trained (or are willing to be) to provide such services university-wide.

[8] Including but not limited to Pure, Web of Science, InCites, Scopus, SciVal and Altmetric Explorer.