Towards a Research Integrity Culture at Universities: From Recommendations to Implementation

LERU advice paper
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Executive summary

The excellence of, and trust in, research produced by universities is inherently linked to the integrity of their researchers. Given that the research process increasingly involves collaboration that transcends disciplinary, institutional and national boundaries, universities have a collective responsibility in developing and implementing a research and educational environment which supports research integrity, thereby maintaining and strengthening confidence in their researchers' work.

As a network of 23 research-intensive universities within Europe, LERU wants to endorse this collective responsibility by encouraging its members and others to commit to making issues of research integrity part of their strategy (e.g. by developing a research integrity development plan which may be part of, or complimentary to, their general strategic plan). This paper outlines how this could be done. We propose five key actions which could support research integrity within universities:

1. **Universities should empower sound research**

   Universities should ensure that the research performed by their researchers is both sound and verifiable. This can be done by implementing measures to guard against suboptimal research practices, some of which are referred to as 'sloppy science' or 'questionable research practices' and can be applied across the whole project lifecycle. These include measures to improve research design and conduct, improving the soundness of reporting results, valuing negative results and replication studies, facilitating cooperative and multidisciplinary team work and ensuring a continuous effort is made in improving approaches to research integrity within a university.

2. **Universities should educate researchers in research integrity at all academic career levels**

   It is important that all researchers have the necessary skills to be able to conduct their research and themselves with integrity. Training could focus specifically on research integrity as a specific topic, or focus on providing further guidance on practical

measures to promote research integrity. The overall aim of research integrity training should be to empower researchers to recognise and deal with problems of research integrity that they may face. Research integrity training should be available across all career levels from undergraduate to senior researchers and should cover all disciplines. Supervisors should receive specific training on how to supervise with integrity. Given the international nature of research, local, national and international differences in research integrity should be addressed and common standards developed for joint projects.

3. Universities should ensure that institutional guidelines and support structures are put in place.

The development of institutional guidelines and the establishment of institutional support structures and functions are essential in the framework of a research integrity policy. Staff with a specific responsibility for research integrity should be appointed to execute and monitor the university's research integrity policy. Staff should be able to raise any concerns so confidential counsellors or advisors should be appointed at both the university and faculty level. Safe harbours should be developed to avoid anonymous reporting, and anonymous complaints should only be investigated in exceptional circumstances. Universities should develop a committee or committees to handle allegations of misconduct if not installed at a national level.

4. Universities should be transparent and accountable

In recent years there has a been a cultural change in which the outcomes of research are expected to be available to a wider public, in what has been termed 'open science'. This brings both opportunities and challenges with regard to research integrity and researchers should be made aware of this. With research open to a wider public, there are opportunities for greater awareness and scrutiny of research results. Universities should encourage researchers to make research data 'open' and provide a research infrastructure in which responsible management of research data is facilitated. Guidance should be developed for researchers on the appropriate use of secondary data from other sources. Research should be credited in a proper and transparent way through responsible authorship or acknowledgment, and previously published research should be properly cited.

More broadly, universities should also be transparent at the level of the commitment to research integrity starting with an easy access to documentation on research integrity, procedures for handling allegations and a way of reporting allegations. Finally, universities are encouraged to participate in the research integrity debate at the regional, national or international level.

5. Universities should foster a research integrity culture

Research integrity should be part of the global research culture at universities. This will require a realignment of incentives within the university environment, where a reward system is introduced which is fairer to researchers who may conduct excellent but not newsworthy research. Universities should monitor and improve the research integrity climate by looking at the effectiveness of research integrity measures over time to assess the impact of initiatives taken to improve integrity.

This paper consists of three parts:

- In Part 1, we present an overview of the recommendations of the paper in an easy to read manner. This section can be used by readers as a quick guide to check an individual university's research integrity strategy against or to identify particular elements of the main paper which they may be particularly interested in.

- In Part 2, we present the main part of the paper which outlines the five actions in more detail, together with a more detailed rationale for each of the recommendations mentioned within each of these actions.

- In Part 3, we outline some of the actions LERU universities have done to improve research integrity at their universities. We hope that this will act as an inspiration to other universities in developing their own ways to improve the research integrity culture within their institutions.

This paper has been written to provide universities with an aspirational framework for developing their own research integrity strategy. The actual recommendations which will be employed will, of course, depend on the specific circumstances at a particular university.

Acknowledgements

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LERU was founded in 2002 as an association of research-intensive universities sharing the values of high-quality teaching in an environment of internationally competitive research. The League is committed to: education through an awareness of the frontiers of human understanding; the creation of new knowledge through basic research, which is the ultimate source of innovation in society; the promotion of research across a broad front, which creates a unique capacity to reconfigure activities in response to new opportunities and problems. The purpose of the League is to advocate these values, to influence policy in Europe and to develop best practice through mutual exchange of experience.

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