Embedding Research Integrity in Postgraduate Education

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Summary

• Context

• Training for Research Integrity

• Culture and Research Integrity

• Conclusions
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The Government has a target to significantly increase R&D intensity

The Government has committed to reaching 2.4% of GDP investment in R&D by 2027, and to reaching 3% in the longer term.

As a first step it will invest an additional £2.3bn over what was previously planned in 2021/22.

UKRI will work with the Government to develop a roadmap for meeting this target to be published in 2019.
A significant increase in public R&D funding will be required to reach the target

Modelling suggests public investment needs to increase by around £10bn p.a.

This means roughly doubling public R&D

Source: http://www.sciencecampaign.org.uk/resource/2-4-one-pager-rnd-investment.html
Increasing R&D intensity also requires that significantly more PhD student are trained

- Proportionate to funding = 25,000 extra PhD students in 2027/28
There are increasing concerns about research integrity and reproducibility.

Research integrity covers a spectrum of issues, and is strongly related to the research culture.

- More common:
  - accidental
  - ignorance
  - incompetence

- Rare:
  - well-meaning
  - deliberate misleading
  - dishonesty

Rare outcomes are considered less common, and there is a spectrum of issues ranging from accidental to well-meaning.
Research integrity is tackled through self-regulation and best practice sharing

Commitments to:

• Upholding the highest standards of rigour and integrity in all aspects of research

• Ensuring that research is conducted according to appropriate ethical, legal and professional frameworks, obligations and standards

• Supporting a research environment that is underpinned by a culture of integrity and based on good governance, best practice and support for the development of researchers

• Using transparent, timely, robust and fair processes to deal with allegations of research misconduct should they arise

• Working together to strengthen the integrity of research and to review progress regularly and openly
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Researcher and PGR training can make an important contribution to addressing research integrity

- More common:
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  - ignorance
  - incompetence

- Rare:
  - well-meaning
  - deliberate misleading
  - dishonesty

Training
Core elements of PGR training relate to good research practice and integrity

- Research methods
- Ethical frameworks and approaches
There are increasing resources available to support training in good research practice

https://bristol.ac.uk/psychology/research/ukrn/about/
Training alone is insufficient to address research integrity.
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Culture and environment are major determinants of research integrity and practices.

- more common: accidental, ignorance, incompetence
- well-meaning
- rare: deliberate misleading, dishonesty

culture
The incentives on researchers are complex, come from many sources, and the relative effects are not well understood.
Example: There is considerable diversity in researcher attitudes to REF

- 15% report effects on focus of research/85% do not
- 1 in 6 report use of ‘pressuring motivational strategies/5 in 6 do not

Example: There are many factors contributing to PGR student mental health and well-being

- Pressures of doctoral research
- Supervisory relationship
- Financial concerns
- Workload and control
- Harassment
- Future career concerns

Research England has recently commissioned a new study exploring incentives in the UK system, and how they affect researcher behaviour.
Current evidence suggests some areas of focus in improving culture for PGR students

• Enhancing the supervisory relationship
• Improving career planning
• Accelerating the transition to open research
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Can funding incentives be adjusted to better reward good supervision and positive outcomes for PGR student?
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Are there opportunities to improve career planning for PGR students at a national level?
Current evidence suggests some areas of focus in improving culture for PGR students

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What further policy incentives should we apply at national level to further stimulate open research practices?

http://www.plosone.org/article/info:doi/10.1371/journal.pone.0026828
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• Embedding research integrity into postgraduate education requires a multi-facetted approach
• Ensuring appropriate training is necessary but not sufficient
• The more complex issue – the nature of the research culture in which PGR student operate – has also to be addressed
• Broader research culture is where the biggest challenges are found, but also where the biggest wins are possible