Research integrity principles

There are four central principles which must be followed for research integrity:

Reliability
Guarantees that research is done well, with proper design, relevant methods, good data analysis and appropriate resource management

Honesty
Research is planned, performed, evaluated and communicated transparently, fairly and without bias

Respect
For colleagues, research participants, society, ecosystem, culture and environment

Accountability/responsibility
Covers the research process from idea to publication, including management, organization, training, supervision, mentorship and supervision of the wider impact of research

Enforcing research integrity

There are research practices that can either enforce or impede research integrity.

Good practices
Do's

- Establish a research environment where integrity is valued and violations are dealt with

- Promote good and rigorous research process and methods within training, supervision and mentoring

- Use resources reasonably, publishing results with justified interpretations and respecting confidentiality of the information

- Consider the health, safety and welfare of the community and collaborators, showing sensitivity to age, gender, culture, religion, ethnic origin and social class

- Ensure transparency and provide data access that is 'as open as possible, as closed as necessary'

- Take equal responsibility for research integrity among all partners, agreeing on goals and open communication, following codes, laws and regulations, and handling conflicts

- Properly acknowledge all parties involved in the research and openly communicate the results to the general public

- Show commitment in reviewing, evaluating and editing research manuscripts

Bad practices
Dont's

- Fabricate results and present them as real

- Manipulate research material, equipment or process; change or leave out data or results without justification

- Use other people's work and ideas without citing the original sources or giving them proper credit

The importance of research integrity in today's society

Ensuring research integrity can bring significant benefits for both scientists and organizations. The Science Europe Working Group lists seven reasons why you should emphasise research integrity, as it:

- Safeguards the **foundations of science** and scholarship

- Maintains **public confidence** in researchers and research evidence

- Underpins continued **public investment** in research

- Protects the **reputation** and careers of researchers

- Prevents adverse **impact** on patients and the public

- Promotes **economic advancement**

- Prevents **avoidable waste** of resources

Implementing research integrity: how can I contribute?

There are few things you could do that would help avoid research misconduct and enforce/implement research integrity:

- Take a course about good research practice, let your staff members attend such courses as well

- Create a pleasant working environment by discussing and addressing results and challenges

- Let your staff members talk about their errors and mistakes by showing patience and support

- Follow the general principles of research integrity: reliability, honesty, respect and accountability

Path2Integrity's role in the context of research integrity

Path2Integrity is a European Union's Horizon 2020 research and innovation programme that raises awareness about research integrity, while educating on how to argue in favour of responsible research and reliable research results. The main goal is to explain how important it is both for you as a citizen and for you as a (future) researcher to have a culture of research integrity. The project aims to:

- establish a culture of research integrity by introducing different integrity role models

- raise awareness of scientific facts about research integrity

- achieve widespread implementation of excellent learning paths

- create units for learning research integrity that address all parties involved in research (students, undergraduates, graduates, young researchers and organizations)

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Research integrity resources

To get a broad picture of research integrity in Europe and around the world be sure to take a look at the resources available through the Path2Integrity Roadmap:

https://www.path2integrity.eu/teaching-RI

Path 2 Integrity

www.path2integrity.eu

Researchers

Let's preserve research integrity

European Code of Conduct for Research Integrity

What is research integrity?

Research can be understood as a systematic way to gain knowledge that helps us understand our world and develop it. Because of this, research needs to be trustworthy and carried out transparently. In order to guarantee the quality of research and prevent misconduct, research integrity must be established.