

What is research *integrity*?

The concept of integrity is two-fold and applies to both *personal* qualities and characteristics, and to *professional* and *disciplinary* norms. Integrity is that aspect of personal character which influences decision making, interpersonal relationships, and the way in which actions are performed. Personal integrity is thus a moral concept that covers a range of attitudes, responses, and decisions. When extended into the professional domain, it can apply to the decisions, relationships, and actions in a professional context. However, integrity can also apply to disciplines and professions themselves, in which the structure and quality of practice and knowledge in a discipline, and the reliability of what is represented by a profession or discipline, are maintained.

Research integrity applies these ideas about integrity, in both personal and professional senses, to the activities of research, emphasizing the integral relationship between the decisions and actions taken by researchers, to the long-term sustainability of the disciplines in which those researchers work.

Disciplines in which integrity is compromised risk, over the long-term, becoming unsustainable, as the reliability of the research record and on-going work within a field are no longer trustworthy. In this latter sense, the quality of scientific and scholarly work is dependent on the integrity of researchers and on the integrity of the disciplines in which they work.

The international framework and standards for research integrity are set out in a number of important documents:

- *Singapore Statement on Research Integrity* (2010);
- *European Code of Conduct for Research Integrity* (2010);
- *Montreal Statement on Research Integrity* (2013).

The national (UK) expectations for institutions are set out in documents from:

- UK Research Integrity Office - UKRIO (2009)
- Universities UK – *Concordat to Support Research Integrity* (2012, rev. 2019).

The basic principles of research integrity are best stated in the *Singapore Statement*. Other documents, whether institutional or from a professional body, generally work with similar kinds of principles, but the four Singapore principles have the advantage of being unambiguous whilst also covering the most important aspects of research integrity, applied to both the personal/professional behaviours of researchers as well as to the ideal of the integrity of disciplines:

- 1) **Honesty** in all aspects of the conduct of research
- 2) **Accountability** and **rigour** in the conduct of research
- 3) **Fairness** and **professional courtesy** when dealing with others
- 4) **Good stewardship** of the resources and ideas of other

These principles can apply in any research discipline. Whilst there are important differences between disciplines and how research in those disciplines is conducted, the Singapore principles are *universally applicable* because they the moral and ethical qualities which underlie research integrity, which are essential to maintaining the integrity of a discipline and which are not affected by differences in method, rationale, or structure of any one discipline in particular compared to other disciplines. The principles are as relevant in the humanities as they are in the sciences.

For research to be reliable and trustworthy, the *honesty* of researchers and the institutions in which they work is fundamental. For research to achieve the aims with which it is tasked it must be performed with *rigour* and the methods and materials used should be open to scrutiny by others, thus rendering the research performed and the researchers who conducted it accountable, whether to other researchers, the public, or funders. For the long-term health of disciplines to be maintained, and for questionable local practice to be avoided, *fairness* and *courtesy* to others are essential. When using funding or ideas, researchers have a duty to use the funding or ideas in a responsible manner, thus demonstrating *good stewardship* of those resources without which their research would not be possible.

Teesside University's *Framework and Code of Practice for Ensuring Research Integrity* presents a summarised series of research activities to which these principles should be applied. These activities break down into three basic kinds of activities: those which involve planning and design of research projects; those which are practical research activities, almost all involving the handling of material and/or data; those which are reporting or dissemination activities, on which the outcomes of a project are communicated and shared with others.