

# **BALANCING RESEARCH AND EDUCATION IN THE SCIENCES**

**Inaugural address  
delivered by Prof J Doe  
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## **Introduction**

Research comprises "creative and systematic work undertaken to increase the stock of knowledge, including knowledge of humans, culture and society, and the use of this stock of knowledge to devise new applications." [1] It is used to establish or confirm facts, reaffirm the results of previous work, solve new or existing problems, support theorems, or develop new theories. A research project may also be an expansion on past work in the field. Research projects can be used to develop further knowledge on a topic, or in the example of a school research project, they can be used to further a student's research prowess to prepare them for future jobs or reports.

## **A new approach**

Original research is research that is not exclusively based on a summary, review or synthesis of earlier publications on the subject of research. This material is of a primary source character. The purpose of the original research is to produce new knowledge, rather than to present the existing knowledge in a new form (e.g., summarized or classified).

Original research can take a number of forms, depending on the discipline it pertains to. In experimental work, it typically involves direct or indirect observation of the researched subject(s), e.g., in the laboratory or in the field, documents the methodology, results, and conclusions of an experiment or set of experiments, or offers a novel interpretation of previous results. In analytical work, there are typically some new (for example) mathematical results produced, or a new way of approaching an existing problem. In some subjects which do not typically carry out experimentation or analysis of this kind, the originality is in the particular way existing understanding is changed or re-interpreted based on the outcome of the work of the researcher.

The degree of originality of the research is among major criteria for articles to be published in academic journals and usually established by means of peer review. Graduate students are commonly required to perform original research as part of a dissertation.