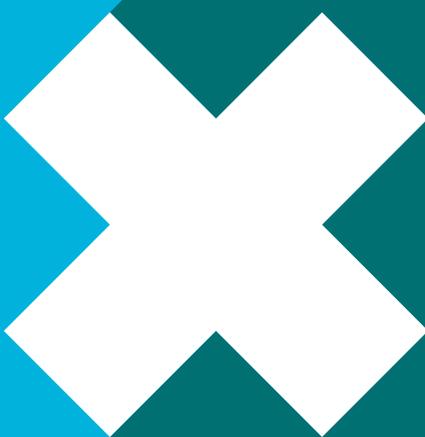


# ACADEMIC SKILLS

for interdisciplinary studies

Revised edition

Koen van der Gaast  
Laura Koenders  
Ger Post



Amsterdam  
University  
Press

## **Academic Skills for Interdisciplinary Studies**

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Koen van der Gaast

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# Introduction

## About this book

This book is intended for university students, especially students taking interdisciplinary courses, as well as anyone who wants to add depth to their academic research or learn how to analyse scholarly texts. As an interdisciplinary student, you're rather like a parachutist: in the years to come, you'll be landing in many different academic landscapes. Not only will you be expected to get to grips with the material quickly and familiarize yourself with different disciplines' specialized terms and mentalities (the scholarly jargon), but you will also be encouraged to add your own knowledge to these disciplines, describe it clearly, and share it in articles and/or presentations. What's more, certain aspects of this will often have to be done in a team. In other words, it is quite an undertaking.

Academic skills are the tools you can use, both during and after your course, to assimilate, develop, share, and question new knowledge. This book was therefore written with the following question in mind: As an interdisciplinary student, what skills should you have developed by the end of your degree course? But that's not to say that only one road leads to Rome. Over the years, you will develop all of these skills in your own way. At the beginning of your studies, you can use this book to find your footing. In the later stages of your studies, you might reach for it from time to time when you think: How did that work again...? We hope that this book proves to be a good and, above all, useful starting point for your academic and interdisciplinary development.

The book can be read in two ways: ab ovo – in other words, from beginning to end, as one usually reads a book; or as a reference guide, depending on where you've got to in your university education or research.

## Central theme: research practice and the empirical cycle

Although academic skills are multifaceted, they share one common denominator: research. A scholar has an inquiring mind, extracts knowledge from other research, and adds his or her own knowledge by doing research. Scholars also have their own methodology for doing research, which distinguishes scholarly research from, say, journalistic research.

What's more, as an interdisciplinary student, you'll find that research is an excellent opportunity to draw connections between the many disciplines you'll encounter during your degree course. From day one, students – and interdisciplinary students in particular – are confronted with insights from research in multiple disciplines. Although we do not have the space here to go into research practice in detail (something we'll leave to more specialized books on research skills), having read this book, you'll have a better understanding of the particular skills a scholar needs. You'll also have a better understanding of the similarities and differences between the humanities, the natural sciences, and the social sciences and the knowledge they produce.

In the nineteenth century, universities were divided into three more-or-less distinct clusters of **academic disciplines**: the natural sciences, which investigate natural phenomena (in the broadest sense of the term); the social sciences, which are concerned with knowledge about human behaviour and human society; and the humanities, which study knowledge originating from the human mind. These three clusters were then subdivided into a wide range of academic disciplines, such as physics (natural science), sociology (social science), and history (the humanities). In the past, these branched off into specializations and subspecializations such as quantum mechanics, educational sociology, and maritime history. At most universities, this division is reflected in the degree programmes on offer.

All of these disciplines have their own research traditions. They all use their own methods and approaches, of course, but these methods have one thing in common: they are systematic and grounded in **empiricism**. Empiricism means 'based on observation.' One example of this structured approach to doing and describing research is the **inductive-deductive cycle**. In this cycle, a scientist formulates a theory based on an observation; this is known as the **inductive phase**. Then the scientist has to consider whether this theory is correct. This is done by devising a method and formulating a testable hypothesis, which is known as **deduction**. Then the scientist tests whether the hypothesis is correct, by gathering data. Finally, the results and the conclusion are evaluated, whereby the scientist reflects on whether the conclusion is consistent with the initial observation. If the conclusion is not consistent with the observation (which is in itself a new observation), the theory is adjusted and the whole cycle begins again.

In scholarly practice, the empirical cycle is not only used to design research, but also to describe the process of doing research. The structure of this book is roughly based on the research phases described above – not because this is the best or only way of doing science, but because it is an accessible way of describing research practice and forms a useful core theme. Moreover, it shows how academic thinking and working is an iterative process, regardless of whether you're a natural scientist, a social scientist, or a humanities scholar (or a mix of all of three), or whether you're doing research or revising for an exam. It consists of a number of connected steps that are often repeated a number of times.

For this reason, in the first part of this book we discuss the orientation phase, in which you learn how to read scholarly literature and formulate the theory that you're going to investigate. In the second part, we discuss the academic skills that will help you draft a good research question, and we explain how to operationalize your question; that is, how to devise a testable method and how to record this process. In the third part of the book, on carrying out and writing up research, you'll learn how to write the main body of a scholarly article.

The fourth part of the book is about reflecting and communicating. These skills, which you will always need, come up during the scientific process in various ways. Although these skills might appear less obvious, they are essential for academia. Without these skills, it would be impossible to do effective research or even to make it as a scholar at all. These skills are especially important for interdisciplinary researchers, because communication between disciplinary perspectives is a key first step in the direction of integration, and because critical self-reflection can reveal and help you overcome the assumptions – often implicit – that hinder integration (Menken & Keestra, 2016). Even if you don't stay in academia, these skills will remain important to you in your career.

Figure 1 The structure of this book is based on the empirical cycle

