

Lesson N°4 : Improve writing skill

Scientific article, thesis, scientific book

Let's explore the distinctions between a scientific article, a thesis, and a scientific book, based on five characteristics : **Purpose, Structure, Length, Audience, Publication Process.**

1. Scientific Article

- **Purpose:** To succinctly communicate specific, original research findings to the scientific community.
- **Structure:** Typically follows the format: Introduction, Methods, Results, and Conclusion.
- **Length:** Generally ranges from 5 to 20 pages, depending on journal requirements.
- **Audience:** Researchers and professionals within the specific field.
- **Publication Process:** Submitted to peer-reviewed journals for evaluation.

2. Thesis

- **Purpose:** To present comprehensive research conducted over an extended period, demonstrating the author's ability to perform independent research.
- **Structure:** Includes a detailed introduction, exhaustive literature review, comprehensive methodology, multiple chapters presenting results, in-depth discussion, and conclusion.
- **Length:** Typically, between 100 and 300 pages, varying by discipline and institutional guidelines.
- **Audience:** Academic committee, scholars, and occasionally the general public.

- **Publication Process:** Evaluated by an academic committee, often culminating in an oral defense.

3. Scientific Book

- **Purpose:** To provide an extensive analysis or synthesis on a particular subject, often compiling existing research and offering new perspectives.
- **Structure:** Organized into thematic chapters, with a general introduction, detailed sections on various aspects of the topic, and a conclusion.
- **Length:** Generally, ranges from 200 to over 500 pages.
- **Audience:** Students, researchers, professionals, and sometimes interested general readers.
- **Publication Process:** Published by academic or commercial publishers, typically undergoing editorial review.

TD N°4 : Scientific article, thesis, scientific book

Exercise 1:

For each description below, determine whether it pertains to a scientific article, a thesis, or a scientific book.

- a) A 180-page academic work submitted for a Ph.D. in Probability and Statistics, including an extensive literature review on stochastic processes, chapters detailing original research on Markov chains, and a discussion of the implications of the findings.
- b) A 12-page document presenting new findings on the existence and uniqueness of solutions to nonlinear partial differential equations, structured with an introduction, methodology, results, and discussion.
- c) A 220-page manuscript titled "Foundations of Biomathematics," offering a comprehensive analysis of mathematical models in biology, intended for advanced undergraduate and graduate students.

Ph.D. = Doctor of Philosophy

Exercise 2:

Complete the table below by marking the appropriate boxes to indicate which characteristics apply to each type of document.

Characteristic	Scientific Article	Thesis	Scientific Book
Peer-reviewed prior to publication			
Contains an exhaustive literature review			
Primarily intended for researchers in the same field			
Serves as a textbook for students			

Characteristic	Scientific Article	Thesis	Scientific Book
Presents original research conducted by the author			

TD N°4 solution: Improve writing skill

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Solutions: **a) Thesis** **b) Scientific Article** **c) Scientific Book**

Exercise 2:

Characteristic	Scientific Article	Thesis	Scientific Book
Peer-reviewed prior to publication	[X]		
Contains an exhaustive literature review		[X]	[X]
Primarily intended for researchers in the same field	[X]	[X]	
Serves as a textbook for students			[X]
Presents original research conducted by the author	[X]	[X]	

