Algerian Democratic and Popular Republic
Ministry of Higher Education and Scientific Research
Abderrahmane Mira University of Bejaia
Faculty of Natural and Life Sciences
Common Core Department

Course 1
Scientific Literature and Academic Writing

Presented by
Dr. AZZOUZ. Z
Dr.BENAISSA F

Academic Year 2025-2026

Outline

- 1. Role of scientific literature
- 2. Types of scientific products
- 3. Actors in scientific publishing
- 4. The publication process
- 5. Scientific publication recognition

Goal

Introduce students to the concept of scientific writing, covering the roles of readers and authors in the scientific publishing process. This course will prepare students for subsequent lessons in the MTT module, which emphasize the need for a methodical information search process.

Introduction

Written outputs required in higher education, particularly at the university level, vary depending on the degree and level of study. Through their work, students must demonstrate not only their understanding but also their ability to apply and even expand upon the knowledge they have acquired.

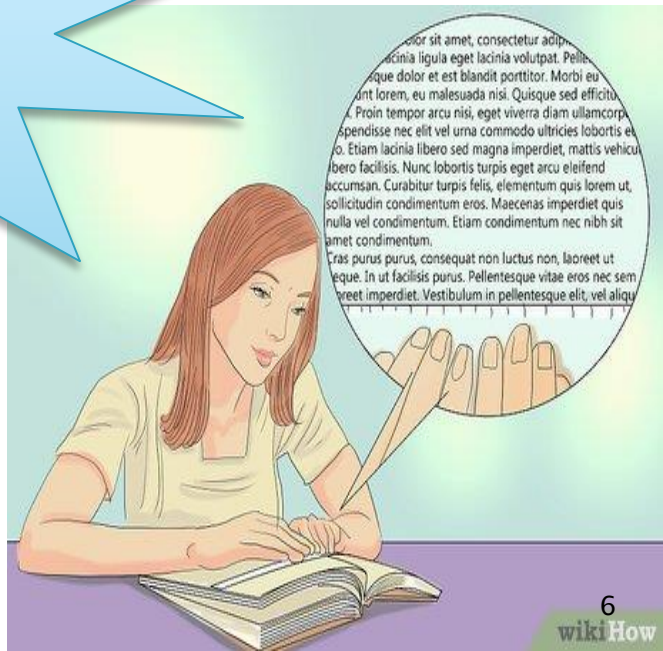
To do this, the student needs :

- Presenting a problem statement, hypothes
- Analyze the information and documents.'
- Organize and support your ideas
- Synthesize everything while opening up new questions

Written exam

Reading note

Student Writing Types

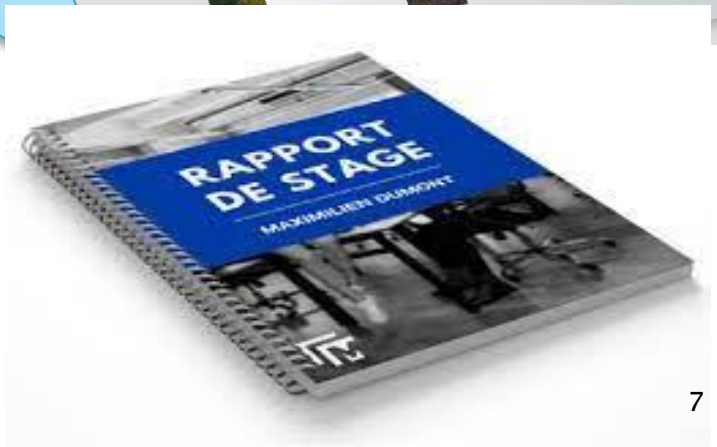


Report

Output report

Internship report

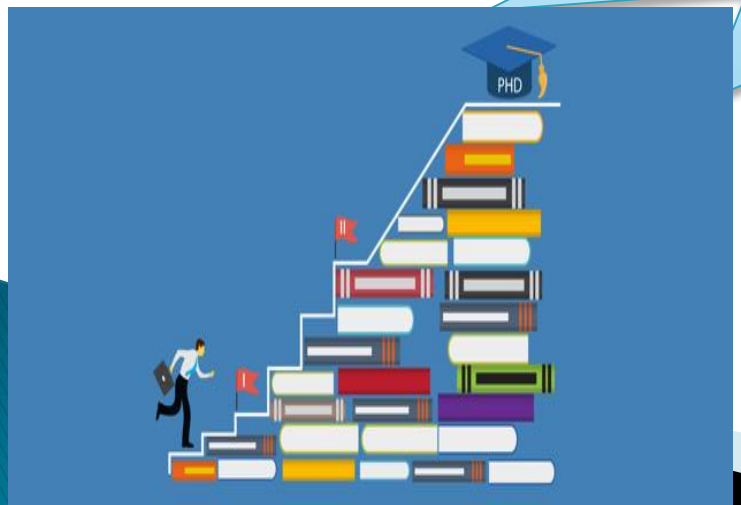
Student Writing Types



Article

Student Writing Types

Thesis



Dissertation

1. The Role of Scientific Literature

Communicate

Preserve « Memorize »

Transmit

- Communicate the state of one's work
- Record ideas and mark a period
- Find references and models
  - Use words and grammatical structures to argue, demonstrate, and explain
    - Challenge, question and even disturb the reader
      - Pose hypotheses and act on the environment

2. Types of Scientific Products

Commercial publishing circuits

In science, publishers (Springer, Elsevier, Wiley, Taylor & Francis...) publish all types of documents, with exceptions for theses and reports.

Publishers can be commercial or non-commercial (small publishers associated with academic societies or institutions).

Commercial publishers

(*Springer, Elsevier, Wiley,* Taylor & *Francis...)*

Non-commercial publishers

associated with learned societies or academic institutions.

Open acces

2. Types of Scientific Products

A.Commercial publishing circuits

B. Grey Literature

2. Types de produits scientifiques

Circuits commerciaux d'édition

Grey Literature

Grey literature refers to non-commercial and unconventional literature not controlled by commercial publishers.

“is produced at all levels of government, academia, commerce and industry, in print or electronic format, but is not controlled by commercial publishers”.

Grey Literature

Types of grey literature

Types	Products
Technical and commercial documentation (of a promotional nature)"	Catalog, advertisement, brochure (plaquette publicitaire)
Scientific and technical documentation	Thesis, Dissertation, Communication, Report: research, activity, internship, technical, Patent, Standard, Recommendation, Translation
Administrative documentation	Official document, Summary note
Handwritten documentation	Letter, Internal note, Invoice, etc."

3. Actors in Scientific Publishing

•The main actor in scientific publishing is the **author**, who produces research results and documents.

•A **review committee** selects peers to evaluate the article.

•The **scientific editor** handles the scientific aspects of the publication, while the **publisher** manages the material aspects once the manuscript is validated.

3. Actors in Scientific Publishing

The scientific editor is responsible for the scientific aspects of the documents.

The publisher is responsible for the material aspects of publication. He takes charge of manuscripts once their scientific content has been validated.

The editorial board selects two or three readers to form the reviewer. These “peers” will read and evaluate the article.

Readers are selected on the basis of their reputation in the fields covered by the articles. They are, or have been, often also authors for these same journal.

4. The Publication Process

The publication process bridges research, writing, and the dissemination of scientific information, making it accessible to readers.

It is situated between the processes of research and writing, and the processes of dissemination and access to information.

These processes are illustrated in the figure below. This chapter describes the steps managed by the editor and the scientific editor.

Steps for Scientific Publication

1. **Topic Selection and Planning**
    1. Identify a novel or underexplored topic.
    2. Conduct an extensive literature review.
2. **Experimental Design**
    1. Formulate hypotheses.
    2. Define the methodologies.
3. **Writing the Paper**
    1. Introduction (background, literature review).
    2. Methods (detailed experimental description).
    3. Results (data presentation).
    4. Discussion (analysis of results).
    5. Conclusion and future outlook
4. **Choosing a Journal**
    1. Select a journal relevant to the field.

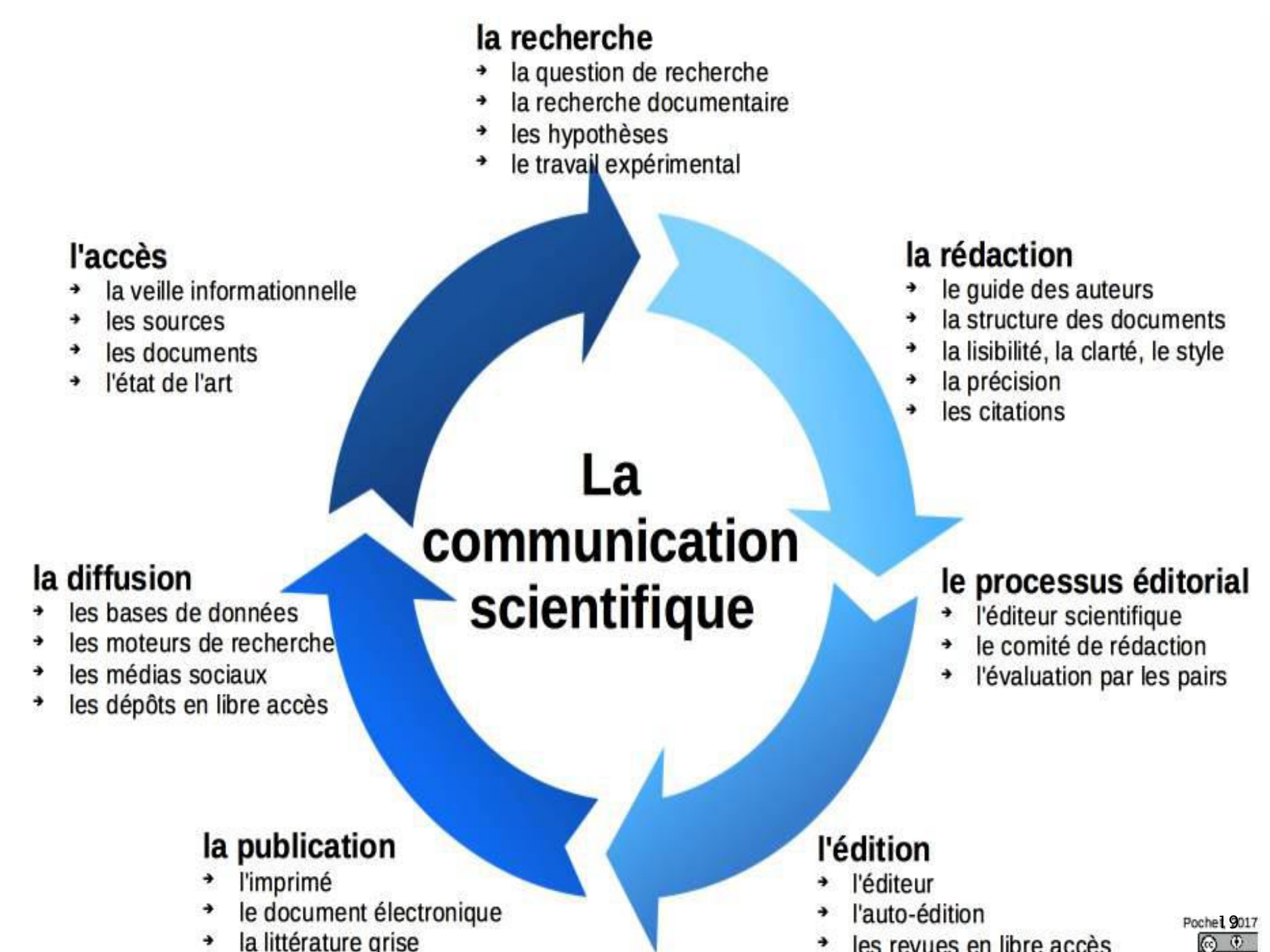
Steps for Scientific Publication

5. Submission and Peer Review

After writing, the manuscript is submitted through the journal's submission system, ensuring that all formatting guidelines are followed. The journal assigns an editor who checks its relevance and sends it to peer reviewers—experts in the field. Reviewers critique the work, pointing out errors, improvements, or missing elements. Authors must then address these comments and resubmit.

6. Publication

Once accepted, the final manuscript is formatted for print. The paper is published online or in print, becoming accessible to the scientific community, often after an embargo period.


la recherche
la question de recherche
la recherche documentaire
les hypothèses
le travail expérimental
la rédaction
le guide des auteurs
la structure des documents
la lisibilité, la clarté, le style
la précision
les citations
le processus éditorial
l'éditeur scientifique
le comité de rédaction
l'évaluation par les pairs
l'édition
l'éditeur
l'auto-édition
les revues en libre accès
la publication
l'imprimé
le document électronique
la littérature grise
la diffusion
les bases de données
les moteurs de recherche
les médias sociaux
les dépôts en libre accès
l'accès
la veille informationnelle
les sources
les documents
l'état de l'art
La communication scientifique

5. Scientific Publication Recognition
« Notoriety of scientific publications »

Bibliometric tools: A set of tools designed to make comparisons between journals, researchers and institutions, and to propose rankings (Classement)

The **h-index** is a metric designed to measure both the productivity (number of publications), and the citation impact (citations received) of the publications of a scientist or scholar. It considers the number of publications (productivity) and the number of citations per publication (impact).

A researcher has an **h-index = h** if they have **h articles that have each been cited at least h times**.

The h-index gives a simple way to evaluate the research output and impact of a scientist or research group

How to calculate the h-index?

1.List all the publications of a researcher.

2.Count the number of citations for each publication.

3.Rank the articles from the most cited to the least cited.

4.Identify the point where the number of citations ≥ the rank (position in the list).

→ This rank is the h-index.

5. Scientific Publication Recognition
« Notoriety of scientific publications »

The **Impact Factor (IF)** is one of the oldest and most widely recognized metrics for evaluating the quality and influence of scientific journals. It is calculated annually based on the average number of citations received by articles published in a particular journal over the previous two years. The IF helps compare journals, researchers, and institutions in terms of their scientific impact.

To calculate IF for year X of a journal

For the whole of year X, we count the number of citations of articles published in X-2 years and in X-1 year by this journal;

This number is divided by the number of articles published by the journal over the same period (in X-2 years and in X-1 year).

$$\text{Formula: IF for year X} = \frac{\text{Number of citations in year X for articles published in years X-2 and X-1}}{\text{Number of articles published in years X-2 and X-1}}$$

5. Scientific Publication Recognition

Factor Impact

Journals / Foods

IMPACT FACTOR 5.2 | Indexed in: PubMed | CITESCORE 5.8

foods

Submit to *Foods*

Review for *Foods*

Share

Sweeteners' Influence on In Vitro α-Glucosidase Inhibitory Activity, Cytotoxicity, Stability and In Vivo Bioavailability of the Anthocyanins from Lingonberry Jams

Journal Menu

- *Foods* Home
- Aims & Scope
- Editorial Board
- Reviewer Board
- Topical Advisory Panel
- Instructions for Authors
- Special Issues
- Topics
- Sections & Collections
- Article Processing Charge

Foods

Foods is an international, peer-reviewed, open access journal on food science published semimonthly online by MDPI. The Italian Society of Food Sciences (SISA) and Spanish Nutrition Foundation (FEN) are affiliated with *Foods* and their members receive discounts on the article processing charges.

- **Open Access** — free for readers, with article processing charges (APC) paid by authors or their institutions.
- **High Visibility:** indexed within Scopus, SCIE (Web of Science), PubMed, PMC, FSTA, AGRIS, PubAg, and other databases.

E-Mail Alert

Add your e-mail address to receive forthcoming issues of this journal:

Enter Your E-Mail Address...

Subscribe

News

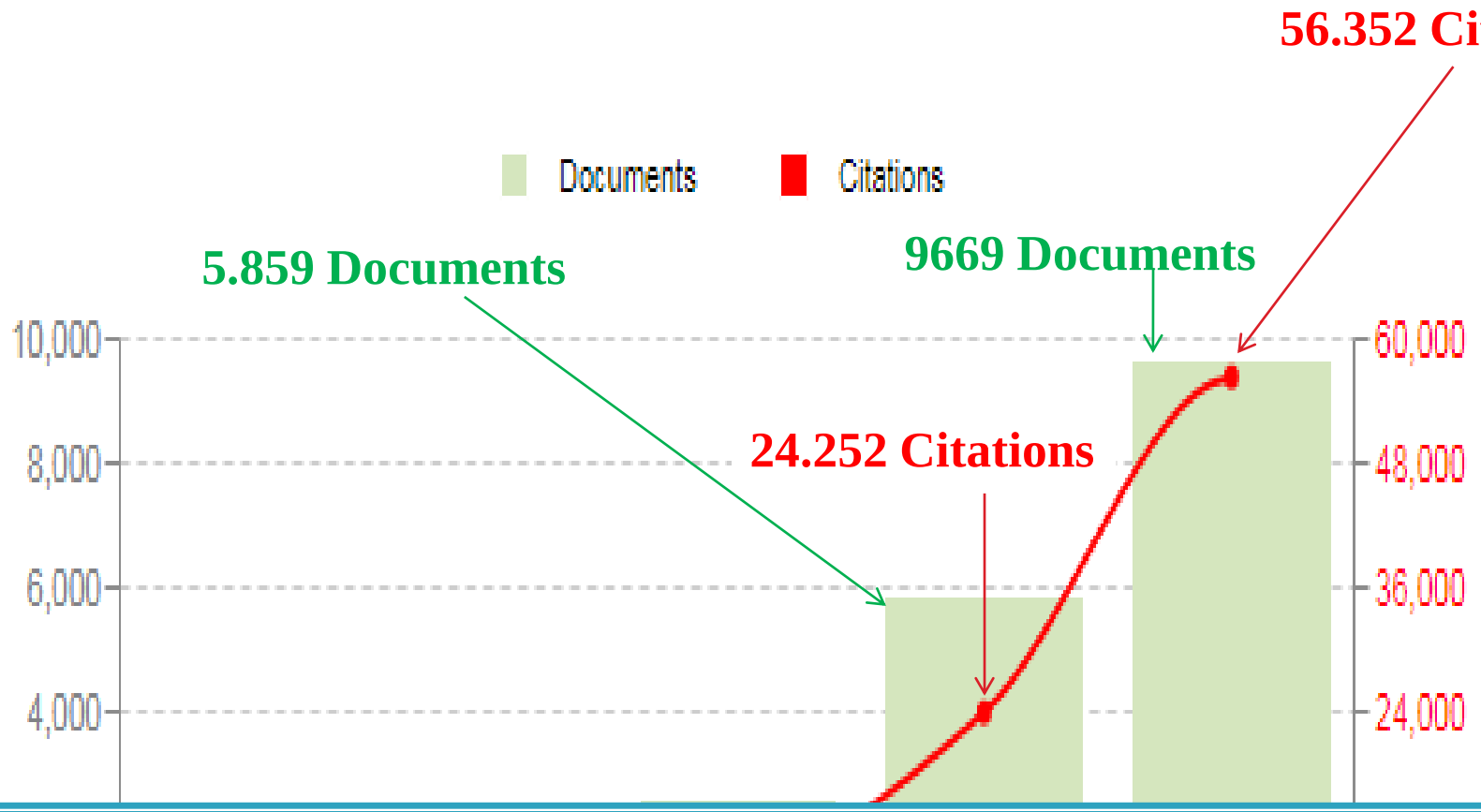
2 October 2023

MDPI Insights: The CEO's Letter #4 – MDPI Presence in China

18 September 2023

Meet Us at the 4th Conference on Food Bioactives & Health, 18–21 September 2023, Prague, Czech Republic

Documents & Citations



the number of citations of articles published in 2021-2022 :
56352+24252= 80604
the number of articles published by this journal in the 2021-2022 period :
9669+5859=15528

FI= 80604/15528

FI=5,2

the number of citations of articles published in 2021-2022 :

56352+24252= 80604

the number of articles published by this journal in the 2021-2022 period :

9669+5859=15528

FI= 80604/15528

FI=5,2

References

Halima, S. (2007). La littérature grise : face méconnue de la documentation scientifique (1re partie). *Documentation et bibliothèques, 53(4), 205–210.*

Pochet B., 2018. Comprendre et maîtriser la littérature scientifique. Les presses agronomiques de Gembloux (Belgique). pp 139-150.