

Introduction

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Purpose

- To record events and clarify our thinking
- To communicate to our colleagues, as we explain concepts and discuss our work
- To add to scientific knowledge, by contributing to books, journals, and conference proceedings.

Why writing is important?

- The impact of poor writing will be on their readers, and thus on their own careers.
- A research paper can remain relevant for years or even decades and, if published in a major journal or conference, may be read by thousands of students and researchers.
- Everyone whose work is affected by a poorly written paper will suffer: ambiguity leads to misunderstanding; omissions frustrate; complexity makes readers struggle to reconstruct the author's intention.

Kind of Publications

- Book
- Thesis
- Book Chapter
- Lecturer's Note
- Journal Article = Journal Lokal, Nasional, Internasional, Internasional (indexed by Scopus), Internasional (ISI Thomson Impact Factor)
- Conference Paper / Extended Abstract in Conference / Seminar / Workshop Proceedings. = Local, Nasional, Internasional, Internasional (IEEE), Internasional (IEEE and Indexed by Scopus).
- Manuscript

Book

- Books—the form of publication that undergraduates are the most familiar with—are usually texts that tend not to contain new results or provide evidence for the correctness of the information they present.
- The main purpose of a textbook is to collect information and present it in an accessible, readable form, and thus textbooks are generally better written than are papers.
- The other forms of publication are for describing the outcomes of new research.

Thesis and Journal Article

- A thesis is usually a deep—or even definitive—exploration of a single or more problems.
- Journals and conference proceedings consist of contributions that range from substantial papers to extended abstracts. A journal paper is typically an end product of the research process, a careful presentation of new ideas that has been revised (sometimes over several iterations) according to referees' and colleagues' suggestions and criticisms.

Conference Paper

- A paper or extended abstract in conference proceedings can likewise be an end-product, but conferences are also used to report work in progress.
- Conference papers are usually refereed, but with more limited opportunities for iteration and revision, and may be constrained by strict length limits.
- An extended abstract is describing the results of a research program, but may not include enough detail to make a solid argument for the claims.

Book vs Published Paper

- In contrast to books—which can reflect an author’s opinions as well as report on established scientific knowledge—the content of a paper must be defended and justified.
- This is the purpose of reviewing: to attempt to ensure that papers published in a reputable journal or conference are trustworthy, high-quality work.
- Indeed, in a common usage a *published paper* is distinguished from a mere *paper* by having been refereed.

Research Paper

- A typical research paper consists of the arguments, evidence, experiments, proofs, and background required to support and explain a central hypothesis.
- In contrast, the process of research that leads to a paper can include uninteresting failures, invalid hypotheses, misconceptions, and experimental mistakes.
- A paper or thesis should be an objective addition to scientific knowledge, not a description of the path that was taken to the result. Thus “style” is not just about how to write, but is also about what to say.