

Jurnal: Pendahuluan

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Kerangka

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Topik, Subtopik, Capaian Belajar

Topik dan subtopik

Minggu

5

Topik

Teknis Penulisan

Subtopik

Pendahuluan

Tim Kurikulum, "Silabus Mata Kuliah NT6094 - 2019", Direktorat Pendidikan, Institut Teknologi Bandung, url <https://akademik.itb.ac.id/app/role:000000000000000000/kurikulum/silabus/44320/view> [20220922]

Capaian Belajar

- Pengetahuan tentang bagian pendahuluan jurnal ilmiah (+).
- Pemahaman tata cara penulisan.
- Kemampuan menuliskan jurnal ilmiah.

Bagian-bagian makalah ilmiah

Bagian-bagian makalah ilmiah

- Abstract
- Introduction
- Methods
- Results
 - Tables
 - Figures
 - Graphs and Histograms
 - Drawings and Photographs
- Discussion
- References

-, “BSCI 1510L Literature and Stats Guide: 3.2 Components of a scientific paper”, Jean and Alexander Heard Libraries, Vanderbilt University, 24 Aug 2020, url <https://researchguides.library.vanderbilt.edu/c.php?g=69346&p=831743> [20220922].

Abstract

- It should be a self-contained unit capable of being understood without the benefit of the text of the article.
- It essentially serves as an "advertisement" for the paper that readers use to determine whether or not they actually want to wade through the entire paper or not.
- They are generally freely available in electronic form and are often presented in the results of an electronic search.
→ It determines further action of the readers without access.

Introduction

- It provides the **background information necessary to understand** why the described experimental / computational / theoretical approach was conducted.
- It should describe **previous research on the topic that has led to the unanswered questions being addressed** by experimental / computational / theoretical approach
- A good introduction should be **fairly heavy with citations**.

Methods

- The description should be **complete enough** to **enable** someone else to **repeat the work**.
- If there is more than one part of the method, it would be good to **present the results in the same order of the methods**.
- Previous **published method is better cited** instead of describing it again.

Results

- It is to summarize general trends in the data without comment, bias, or interpretation.
- Tables and figures should be used when they are a more efficient way to convey information than verbal description.
- They must be independent units, accompanied by explanatory captions that can be understood without reading the text.
- Do not repeat in the text the information in tables and figures, but do cite them, with a appropriate summary statement.

Discussion

- It contains at least
 - the relationship between the results and the original hypothesis,
 - an integration of your results with those of previous studies in order to arrive at explanations for the observed phenomena,
 - possible explanations for unexpected results and observations.
- Between Results and Discussion section, **avoid redundancy**.
- End the Discussion with a **summary of the principal points** you want the reader to remember.

References

- Cite only **necessary references**.
- Provide **sufficient information** for further literature searching.
- Prefer to use **credible source**.

Anatomi makalah ilmiah



Wordvice HJ, "How to Write a Strong Research Paper Introduction Section", Wordvice, 20 Oct 2016,
url <https://blog.wordvice.com/how-to-draft-a-compelling-introduction-for-your-journal-article/> [20220922].

Ukuran bagian-bagian

Rentang ukuran bagian-bagian

Section	Pages	Words	Paragraphs	References
Introduction	1 (ideally)	400	1-4 (ideally 3)	5 – 10
Methods	2 – 3	≤ 750	6 – 9	5 – 15
Results	2 – 3 (+figures, +tables)	≤ 1000	4 – 9	0
Discussion	3 – 4	1000 – 1500	≤ 10	10 – 20

Claudio Gil Soares de Araújo, “Detailing the Writing of Scientific Manuscripts: 25-30 Paragraphs”, Arquivos Brasileiros de Cardiologia [Arq Bras Cardiol], vol 102, no 2, p e21-e23, Feb 2014, url <https://doi.org/10.5935/abc.20140019>.

Kapan menulis pendahuluan?

Tulis terakhir

- Write your introduction **last**.
- An introduction **summarizes all of the things** you've learned from your research.
- While it can feel good to get your preface done quickly, you should **write the rest of your paper first**. Then, you'll find it easy to create a clear overview.

Microsoft 365, "How to write an introduction for a research paper", Microsoft, 10 Aug 2021,
url <https://www.microsoft.com/en-us/microsoft-365-life-hacks/writing/how-to-write-an-introduction-for-a-research-paper> [20220922].

Urutan penulisan makalah ilmiah

- Results
- Discussion
- Introduction
- Abstract

-, “Journal Article: Introduction”, MIT Communication Lab, Broad Research Communication Lab, Broad Institute, url <https://mitcommlab.mit.edu/broad/commkit/journal-article-introduction/> [20220922].

Bagian pendahuluan

Tujuan

- Your paper's introduction is an opportunity to provide readers with the background necessary to understand your paper: the status of knowledge in your field, the question motivating your work and its significance, how you sought to answer that question (methods), and your main findings.
- A well-written introduction will broaden your readership by making your findings accessible to a larger audience.

-, "Journal Article: Introduction", MIT Communication Lab, Broad Research Communication Lab, Broad Institute, url <https://mitcommlab.mit.edu/broad/commkit/journal-article-introduction/> [20220922].

Formula bagian pendahuluan

General background

Specific background

Knowledge gap

Here we show...

Formula: General and specific backgrounds

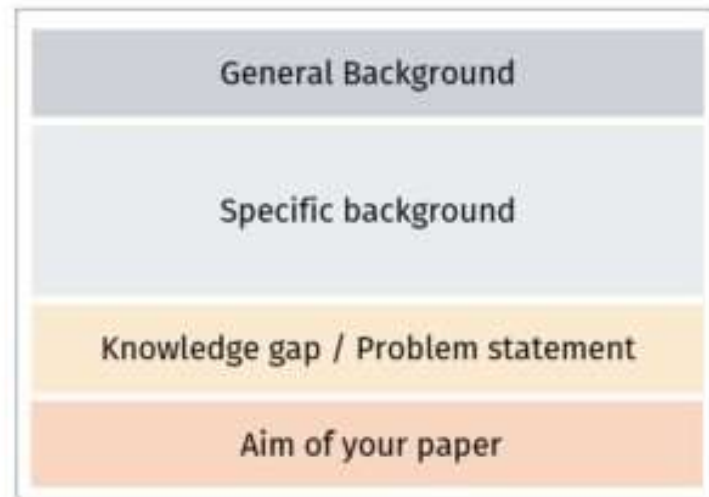
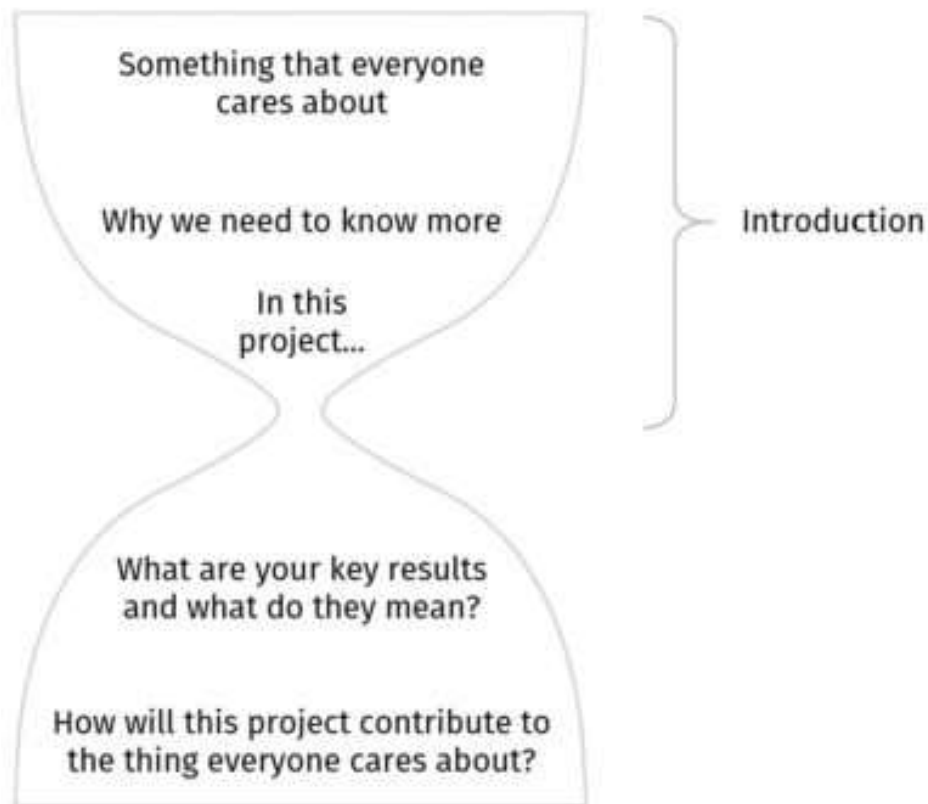
1. **General Background**. Introduce the general area of science in which your project takes place, highlighting the status of our understanding of that system.
2. **Specific Background**. Narrow down to the sub-area that your paper will be addressing, and again highlight the extent of our understanding in this sub-area.

Formula: Knowledge gap

3. **Knowledge Gap**. After discussing what we know, articulate what we do not know, specifically focusing on the question that has motivated your work. The prior two components should serve as a set-up for this question. That is, the question motivating your work should be a logical next step given what you've described in the general and specific background.

Formula: Here we show...

4. “Here we show...” Very briefly summarize your methods and findings. Note that you may end this section with a sentence or two on the implications/novelty of your results, although this is not essential given that you will more thoroughly address these points in the discussion section.



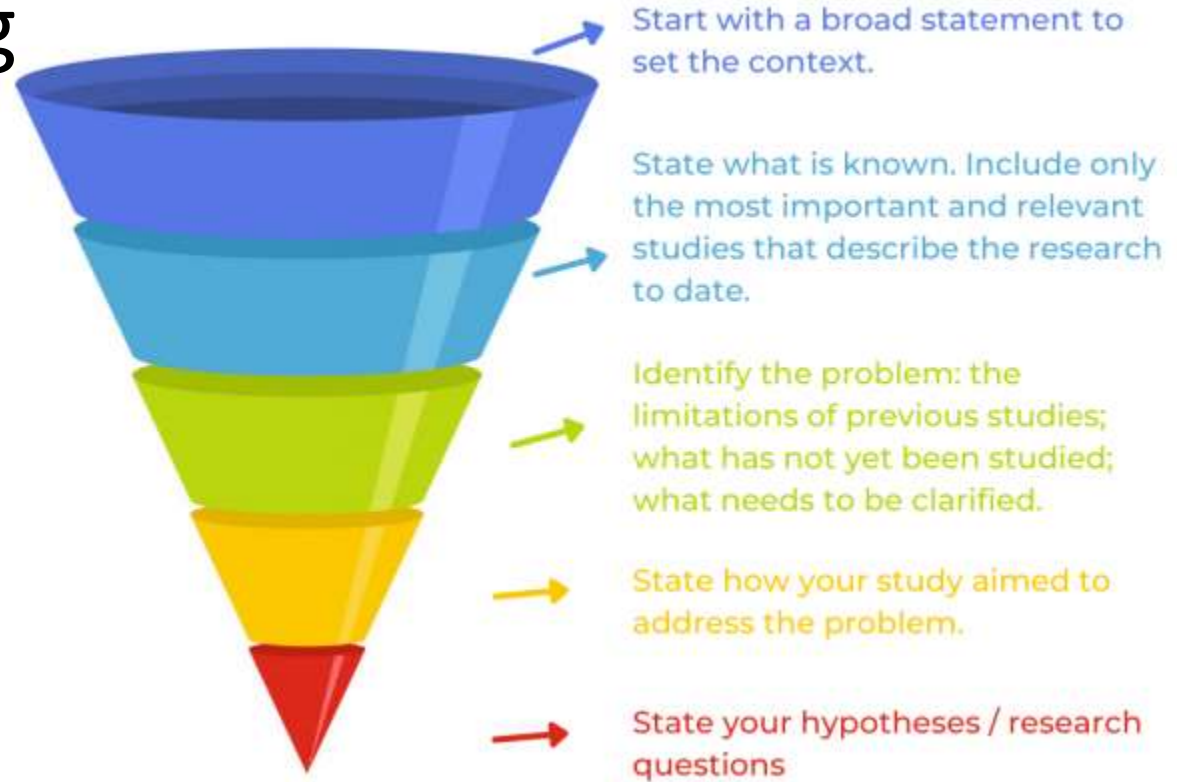
Xinyao “Anna” Liang, “Journal Article: Introduction”, Communication Lab, Nuclear Science & Engineering, MIT Communication Lab, url <https://mitcommlab.mit.edu/nse/commkit/journal-article-introduction/> [20220922].

Empat komponen utama

1. General background information.
2. Specific background information.
3. A description of the gap in our knowledge that the study was designed to fill.
4. A statement of study objective, and (optionally) a brief summary of study.

Charlesworth Author Services, “How to write an Introduction to an academic article”, Charlesworth Author Services, 17 Aug 2020, url <https://www.cwauthors.com/article/How-to-write-an-introduction-to-an-academic-article> [20220922].

Struktur corong



Rachel Baron, "3 Fundamental Principles Of Writing An Effective Introduction To Your Journal Article", AsiaEdit, 16 May 2019, url <https://asiaedit.com/blog/3-fundamental-principles-of-writing-an-effective-introduction-to-your-journal-article> [20220922].

Sub bagian pendahuluan

Sub bagian v1

- An **opening statement or question** that attracts the reader's attention — this is often called "the hook",
- Some **supporting sentences** which link "the hook" to the thesis, and
- A **thesis statement** that states the purpose and plan of the whole essay.

-, "UNIT 1 — Lesson 1A Parts of the Introduction", English Language Centre, Division of Continuing Studies, University of Victoria,
url https://web2.uvcs.uvic.ca/courses/elc/Sample/Advanced/unit1/u1_l1a_1.htm [20220922].

Sub bagian (lanj.)

- Hugh Lofting's character, Dr. Doolittle, could talk to animals and they could talk back. Many people fantasize about having such a skill. Imagine being able to talk to your household pets and getting a response back. Could it ever be possible? Language acquisition studies among primates such as gorillas, chimpanzees, and bonobo chimpanzees suggest that the answer is yes, and no.

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Contoh lain (berbeda paragraf)

During the last two decades, with the miniaturization of the devices, paediatric endourology has always been moving towards the invention of less invasive approaches. The treatment of kidney stones is another area which is searching for the optimal minimally or non-invasive modalities and therefore the competition between percutaneous nephrolithotomy (PNL), flexible ureteroscopy (URS) and shock wave lithotripsy (SWL) have dramatically decreased the numbers of open surgical procedures ^[1-3].



Preparation of the
background

Abdullah Armağan, "How to write an introduction section of a scientific article?", Turkish Journal of Urology [Turk J Urol], vol 39, no 1, Suppl 1, p 8-9, Sep 2013, url <https://doi.org/10.5152/tud.2013.046>.

The 'all seeing needle' which is an optical system through a special puncture needle has recently been introduced as a novel instrument which can be safely used to obtain an optimal renal access prior to PNL [4]. It has been suggested that this system may facilitate the initial access and therefore helps the urologists to overcome one of the most important steps of the procedure. Subsequently this optical system was used for single step PNL which is then called the 'microperc'. Desai et al. have successfully performed renal stone fragmentation in 10 cases through this 4.85 fr needle and demonstrated the first feasibility and efficacy of microperc in select patients [5].



Discussion of the basic references related to the main topic

In this study, we aimed to elucidate the applicability and safety of microperc in the treatment of paediatric kidney stones. To our knowledge this is the first report of microperc specialized to paediatric population.



Indication of the purpose

Sub bagian v2

- An overview of the topic.
- Prior research.
- A rationale for your paper.
- Describe the methodology you used.
- A thesis statement.
- An outline of the paper.

Microsoft 365, “How to write an introduction for a research paper”, Microsoft, 10 Aug 2021,
url <https://www.microsoft.com/en-us/microsoft-365-life-hacks/writing/how-to-write-an-introduction-for-a-research-paper> [20220922].

Sub bagian v3: Delapan elemen

1. Definition of the topic.
2. Historical understanding of the topic.
3. Current understanding of the topic.
4. Refutation of any of the above.
5. A statement of the problem.
6. Negative consequence(s) if is not solved.
7. Positive consequence(s) if it is solved.
8. A hint at the solution(s).

-, "Elements of an Effective Introduction", English 101,
url <https://cooperseng101.wordpress.com/syllabus-part-2-course-outline/elements-of-an-effective-introduction/> [20220922].

Sub bagian v4: Empat bagian penting

1. An Attention Grabbing Opening Statement or Question.
2. The Topic Statement.
3. Relevance Sentence.
4. The Main Points.
5. Thesis Statement.

Abir Ghenaiet, "Most Important Parts of an Essay Introduction", INK, 1 Sep 2022,
url <https://inkforall.com/ai-writing-tools/hook-writing/parts-of-an-introduction/> [20220922].

Langkah-langkah

4 langkah menulis bagian pendahuluan

1. Provide background information and set the context.
2. Introduce the specific topic of your research and explain why it is important.
3. Mention past attempts to solve the research problem or to answer the research question.
4. Conclude the Introduction by mentioning the specific objectives of your research.

Yateendra Joshi, “4 Step approach to writing the Introduction section of a research paper”, Editage Insights, 18 Sep 2018, url <https://www.editage.com/insights/4-step-approach-to-writing-the-introduction-section-of-a-research-paper> [20220922].

4 langkah umum

1. **Locate** – situate the study in a broad context and connect this to the journal reader.
2. **Focus** – say what the paper is about in particular.
3. **Argue / Expand** – say what the paper is going to say.
4. **Outline** – lay out the steps that the paper will take and signal their order.

Pat Thomson, “writing the introduction to a journal article”, 11 Jan 2016,
url <https://patthomson.net/2016/01/11/writing-the-introduction-to-a-journal-article/> [20220922].

5 langkah menuliskan pendahuluan esai

- Step 1: Hook your reader
- Step 2: Give background information
- Step 3: Present your thesis statement
- Step 4: Map your essay's structure
- Step 5: Check and revise

Shona McCombes, "How to Write an Essay Introduction | 4 Steps & Examples", Scribbr, 14 Sep 2022, url <https://www.scribbr.com/academic-essay/introduction/> [20220922].

10 tips menulis pendahuluan yang efektif

1. Start broadly and then narrow down.
2. State the aims and importance.
3. Cite thoroughly but not excessively.
4. Avoid giving too many citations for one point.
5. Clearly state either your hypothesis or research question.
6. Consider giving an overview of the paper.
7. Keep it short.
8. Show, don't tell
9. Don't bury your readers in detail.
10. Check the journal requirements.

John Zepernick, "10 tips for writing an effective introduction to original research papers", ThinkSCIENCE, 2022, url <https://thinkscience.co.jp/en/articles/effective-introductions-to-original-research> [20220922].

Diskusi dan tugas

Ringkasan

- Terdapat berbagai sumber mengenai bagian-bagian makalah ilmiah, dengan bagian **Pendahuluan** selalu disebutkan.
- Sub bagian dari bagian pendahuluan setidaknya meliputi: **Latar belakang umum** dan **khusus**, **kesenjangan pengetahuan**, **tujuan** penulisan makalah ilmiah, dan **kerangkanya**.
- Jumlah **langkah-langkah** membuat bagian Pendahuluan mengikuti jumlah sub bagian yang dirujuk.
- Bagian **Pendahuluan ditulis terakhir**, bisa juga **kerangkanya** lebih dahulu, baru kemudian **dikoreksi setelah makalah selesai**.

Diskusi

- Silakan berdiskusi 😊.

Kriteria tugas

Kategori	Materi	Minimum jumlah soal
1	Tautan ke materi daring	1
2	Bagian-bagian jurnal ilmiah	1
3	Panjang bagian pendahuluan suatu jurnal ilmiah	1
4	Hal-hal dalam bagian pendahuluan suatu jurnal ilmiah	1
5	Urutan pengerjaan bagian-bagian jurnal ilmiah	1

Tautan

- Edunex
url <https://edunex.itb.ac.id/courses/43542/preview/124039/55008>
- Waktu 120 menit
- Jumlah 5 soal
- Jenis essay

Pertanyaan (1-3)

1. Cantumkan setidaknya 10 tautan ke halaman web yang menjelaskan bagian pendahuluan dari suatu jurnal ilmiah.
2. Tuliskan bagian-bagian dari bagian pendahuluan suatu jurnal ilmiah. Tuliskan rujukan yang Anda gunakan.
3. Berapa panjangkah (dalam jumlah kata) bagian pendahuluan suatu jurnal ilmiah sebaiknya? Cantumkan referensi yang Anda gunakan.

Pertanyaan (4-5)

4. Apa hal-hal yang perlu dicantumkan dalam bagian pendahuluan suatu jurnal ilmiah? Cantumkan referensi yang Anda gunakan.
5. Sebutkan bagian-bagian dari suatu jurnal ilmiah, di mana bagian pendahuluan termasuk di dalamnya. Bagaimana urutan pengerjaan bagian-bagian tersebut? Jelaskan. Cantumkan rujukan yang Anda gunakan.

Terima kasih

-, “..
url <https://../> [20220922].