



A title should be the fewest possible words that accurately describe the content of the paper. Written in english (Times New Roman 14, bold, center)

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ABSTRACT

All information about the formatting requirements is contained in this document. Please review it carefully. You may use the document as a template and copy/paste the content of your article here – this is probably the easiest option. Several styles have been included in this template to facilitate formatting – you may find it easier to use them instead of formatting each segment differently. As a primary goal, the abstract should render the general significance and conceptual advance of the work clearly accessible to a broad readership. In the abstract, minimize the use of abbreviations and do not cite references. The word length is not more than 250 words, including the **background of study, aims and scope of the paper, methods, summary of results or findings, conclusions, and implications**, written in English. The number of page of each paper is one's (1) pages. (Times New Roman, 10)

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INTRODUCTION

Your final goal is to write an article that complies with the standard rules of ScienceEdu. The article should be in the softcopy format of A4 paper size format. Margin: Top = 3 cm, bottom = 2.5 cm, left = 2.5 cm, right = 2.5 cm. The column width on A4 is 7.6 cm. The distance between the two columns is 0.8 cm. The indented paragraph size is 0.5 cm.

Type and Size of font: follow the sizes listed in Table 1. Pay close attention to the font size, 1 point is around 0.35 mm. The lowercase letter of "j" is the reference of

measurement. The recommended font to be used is Times New Roman.

Each column is in "justify" alignment. The tables and figures should be adjusted to the width of the column. On the last page of your paper, set the width and the length to be equal. Use automatic hyphens and spell checkers (if available).

The Introduction should provide a clear background, a clear statement of the problem, the relevant literature on the subject, the proposed approach or solution, and the new value of research which it is innovation. The purpose of the Introduction is to stimulate the reader's

How to cite

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Ex: Kalampos, G., & Ravanis, K. (2019). Thermal conduction in metals: Mental representations in 5-6 years old children's thinking. *Jurnal ilmiah pendidikan fisika Al-Biruni*, 8(1), 1-9.

interest and to provide pertinent background information necessary to understand the rest of the paper. You must summarize the problem to be addressed, give background on the subject, discuss previous research on the topic, and explain exactly what the paper will address, why, and how. A good thing to avoid is making your introduction into a minireview. There is a huge amount of literature out there, but as a scientist, you should be able to pick out the things that are most relevant to your work and explain why. This shows an editor/reviewer/reader that you really understand your area of research and that you can get straight to the most important issues.

Keep your Introduction to be very concise, well structured, and inclusive of all the information needed to follow the development of your findings. Do not over-burden the reader by making the introduction too long. Get to the key parts other paper sooner rather than later. Tips:

- Begin the Introduction by providing a concise background account of the problem studied;
- State the objective of the investigation. Your research objective is the most important part of the introduction;
- Establish the significance of your work: Why was there a need to conduct the study?;
- Introduce the reader to the pertinent literature. Do not give a full history of the topic. Only quote previous work having a direct bearing on the present problem. (State of the art, relevant research to justify the novelty of the manuscript);
- State the gap analysis or novelty statement;
- Clearly state your hypothesis, the variables investigated, and concisely summarize the methods used;
- Define any abbreviations or specialized/regional terms.

Example of novelty statement or the gap analysis statement in the end of Introduction section (after state of the art of previous

research survey): "..... (short summary of background)..... A few researchers focused on There have been limited studies concerned on Therefore, this research intends to The objectives of this research are"

Be concise and aware of who will be reading your manuscript and make sure the Introduction is directed to that audience. Move from general to specific; from the problem in the real world to the literature to your research. Lastly, please avoid making a subsection in the Introduction.

1. Figures and Tables

The position of figures and tables is at the beginning or end of the column. Avoid placing in the center of the column. Large figure and tables can be expanded to meet both columns. The title of the figure is positioned below the image the "center" alignment; the title of the table is above the table in "justify" alignment. Avoid placing figures and tables before they are mentioned in the text. All figures and Tables are referenced in the text (there are descriptions in the text of the article). For example, Table 1 is an example of a table format and Figure 1 is an example of an image spectrum. Avoid displaying tables and figures without explanation in the text.

The label of the coordinate axes in an image can often be confusing. Use words rather than symbols. For example, write "Magnetism," or "Magnetism (M)" rather than just using "M." Place the unit in parentheses. Don't label the coordinate axis only with units. For example, write "Magnetism (A / m)" or "Magnetism (A·m1)." Do not label the axis of the coordinate with the ratio or quantity and unit. For example, write "Temperature (K)," not "Temperature / K."

Multiplier symbols can also be confusing. Write "Magnetism (kA / m)" or "Magnetization (103 A / m)." The image label must be readable, about 10-point in size.

Table 1. The Sample of Table Format

No	Description	Explanation
1	Description 1	Explanation
2	Description 2	Explanation
3	Description 3	Explanation
4	Description 4	Explanation
5	Description 5	Explanation

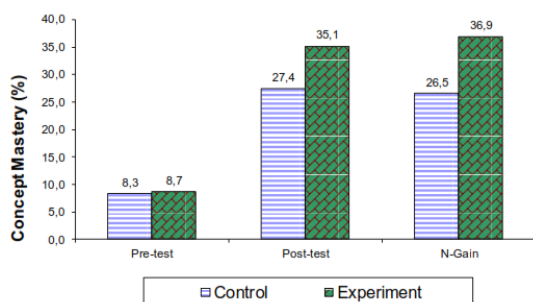


Figure 1. The Example of An Image of the Spectrum Absorption Coefficients of Organic Semiconductor Materials

2. Cite

The reference and quotation are written using parentheses (name, year), for example: (Diani, 2015), (Sugiyono, 2011), (Saregar, 2016), (Honeycutt, 2011),

For articles published in other language translation journals, first quote the Indonesian language, then follow the publishing language.

3. Abbreviations and Acronyms

Define abbreviations and acronyms for the first time they are used in text, even if they have been defined in the abstract. Abbreviations such as IEEE, SI, MKS, CGS, ac, dc, and rms need not be defined. Do not use abbreviations in the title unless they are absolutely unavoidable.

4. Equation

Equation numbering is done sequentially with the number of equations written in parentheses and right alignment, for example (1). The quantity and variables are written in italic Roman symbol. Use a dash (-) to indicate a minus sign. Use parentheses () for the denominators or dividers to avoid mistakes. Give the comma in the equation if the equation is in a sentence. For example equation (1):

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \quad (1)$$

If the equation is mentioned in a sentence then simply write "(1)," or "equation (1)," except at the beginning of the sentence, it is not written using a comma after parentheses. For example "Equation (1) is ..."

5. Miscellaneous

The use of Roman numeric symbols for numbering the chapters or sub-chapters is optional. If you use Roman numeric symbols, then the references section, the acknowledgement section, and the sub-headings or sub-chapters are not in letters format. Use two spaces to split between sub-chapters. Use hyphens on modified words: "zero-field-cooled magnetization", avoid irregular sentences such as, "Using (1), potential differences have been calculated", the proper writing should be "potential differences are calculated using equation (1), "or" using equation (1), we calculated the potential differences".

Decimal numbers are not written ".25". Use a zero before the period to write a decimal number: "0.25". Use "cm³," not "cc." Do not mix full words and abbreviations in physics units, for example: "weber / m²" instead of "Wb / m²". Use the full word when writing a physics unit in a sentence: "some Henry ...".

METHODS

In the Method section, you explain clearly how you conducted your research order to: (1) enable readers to evaluate the work performed and (2) permit others to replicate your research. You must describe exactly what you did: what and how experiments were run, what, how much, how often, where, when, and why equipment and materials were used. The main consideration is to ensure that enough detail is provided to verify your findings and to enable the replication of the research. You should maintain a balance between brevity (you cannot describe every technical issue)

and completeness (you need to give adequate detail so that readers know what happened). Tips:

- Define the population and the methods of sampling;
- Describe the instrumentation;
- Describe the procedures and if relevant, the time frame;
- Describe the analysis plan;
- Describe any approaches to ensure validity and reliability;
- Describe statistical tests and the comparisons made; ordinary statistical methods should be used without comment; advanced or unusual methods may require a literature citation, and;
- Describe the scope and/or limitations of the methodology you used.

The description of the course of research should be supported by **references**, so the explanation can be accepted scientifically. Use international units (MKS) or CGS as the units of dimensions (the SI unit is recommended). The British scale system can also be used as a secondary method written in parentheses.

Avoid using SI and CGS together, for example the current in amperes and the magnitude of the magnetic field in oersted. This will cause an error because the dimensions are not suitable. State clearly the unit used in each quantity, either SI or CGS units.

RESULTS AND DISCUSSION

The purpose of the Results and Discussion is to state your findings and make interpretations and/or opinions, explain the implications of your findings, and make suggestions for future research. Its main function is to answer the questions posed in the introduction, explain how the results support the answers and, how the answers fit in with existing knowledge on the topic. The Discussion is considered the heart of the paper and usually requires several writing attempts.

The discussion will always connect to the introduction by way of the research

questions or hypotheses you posed and the literature you reviewed, but it does not simply repeat or rearrange the introduction; the discussion should always explain how your study has moved the reader's understanding of the research problem forward from where you left them at the end of the introduction.

To make your message clear, the discussion should be kept as short as possible while clearly and fully stating, supporting, explaining, and defending your answers and discussing other important and directly relevant issues. Care must be taken to provide commentary and not a reiteration of the results. Side issues should not be included, as these tend to obscure the message. Tips:

1. State the Major Findings of the Study;
2. Explain the Meaning of the Findings and Why the Findings Are Important;
3. Support the answers with the results. Explain how your results relate to expectations and to the literature, clearly stating why they are acceptable and how they are consistent or fit in with previously published knowledge on the topic;
4. Relate the Findings to Those of Similar Studies;
5. Consider Alternative Explanations of the Findings;
6. Implications of the study;
7. Acknowledge the Study's Limitations, and;
8. Make Suggestions for Further Research.

It is easy to inflate the interpretation of the results. Be careful that your interpretation of the results does not go beyond what is supported by the data. The data are the data: nothing more, nothing less. Please avoid and makeover interpretation of the results, unwarranted speculation, inflating the importance of the findings, tangential issues or over-emphasize the impact of your research.

CONCLUSION AND SUGGESTION

The conclusion is intended to help the reader understand why your research should matter to them after they have finished reading the paper. A conclusion is not merely a summary of the main topics covered or a re-statement of your research problem, but a synthesis of key points. It is important that the conclusion does not leave the questions unanswered. Tips:

1. State your conclusions clearly and concisely. Be brief and stick to the point;
2. Explain why your study is important to the reader. You should specify a sense of relevance;
3. Prove to the reader, and the scientific community, that your findings are worthy of note. This means setting your paper in the context of previous work. The implications of your findings to educational contexts and/or future research should be discussed within a realistic framework.

For most essays, one well-developed paragraph is sufficient for a conclusion, although in some cases, a two or three paragraph conclusion may be required. Another important things about this section is (1) do not rewrite the abstract; (2) statements with "investigated" or "studied" are not conclusions; (3) do not introduce new arguments, evidence, new ideas, or information unrelated to the topic; (4) do not include evidence (quotations, statistics, etc.) that should be in the body of the paper.

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AUTHOR CONTRIBUTIONS

The Author Contributions Statement can be up to several sentences long and should briefly describe the tasks of individual authors. Please list only 2 initials for each author, without full stops, but separated by

commas (e.g. AS, AA). In the case of two authors with the same initials, please use their middle initial to differentiate between them (e.g. ATS, ASS). The Author Contributions Statement should be included at the end of the manuscript before the References.

REFERENCES

All citations in the text must be in the reference list and vice-versa. The references should only include articles that are published or accepted. Datasets that have been deposited to an online repository should be included in the reference list, include the version and unique identifier when available. For accepted but unpublished works use "in press" instead of page numbers. Unpublished data, submitted manuscripts, or personal communications should be cited within the text only, for the article types that allow such inclusions. Personal communications should be documented by a letter of permission.

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An article published in a journal:

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Book:

Creswell, J. W., Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative,*

and Mixed Methods
Approaches. Germany: SAGE
Publications.

Theses and Dissertations:

Bachtiar, R. (2023). Animated reasoning:
Supporting Students' Mechanistic
Reasoning in Physics by Constructing
Stop-Motion Animations (doctoral
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