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Guidance/template for writing manuscripts in Gravity: Jurnal Ilmiah Penelitian dan Pembelajaran Fisika (Version 2020) (Times new romance, 16pt, bold, and using Sentence case)

First Name1 Last Name1^{1*}, First Name2 Middle Name2 Last Name2¹, Last Name3²
(12pt, Bold)

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ABSTRAK

The abstract arranged in a straight forward and concise manner and summarizes about: 1) a brief background (if any, just one or two sentences only); 2) The purpose and/or scope of research; 3) (brief) method used; 4) summary of results/ finding; 5) conclusion. Text length between 150-200 words (11pt)

Keywords: consisting of 3-5 words, written in alphabetical order (11 pt)

DOI:

INTRODUCTION (Uppercase, 12pt, bold, centre)

The manuscript submitted is the result of research or conceptual study in the field of physics education and applied physics. The number of manuscript pages is between 5-10 pages.

The introduction begins with the general background of the study (not too long, only 1-2 paragraphs). Then present a *State of the Art* that is a brief review of literature or previous studies. Try to have references to articles from the journal for the past eight years. In this section also must present *a gap analysis or statement of the gap* (originality) or the contribution of novelty (novelty statement) or differences from previous studies.

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Examples of the presentation of *State of the art and Gap analysis*:

“...the assessment of learners’ NOS views remains an issue in research on NOS (Aikenhead, 2014; Lederman, Wade, & Bell, 2015). In the majority of the those efforts, standardized and convergent paper and pencil instruments have been used to assess learners’ NOS views. Several problematic assumptions underlie such instruments and cast doubt on their validity (Aikenhead, Ryan, & Desautels, 2017). Moreover, there are concerns regarding the usefulness of standardized instruments for research related to NOS”.

Don't forget to present *the problem/hypothesis/research objective*. Avoid literature reviews or literature studies or other theoretical or general definitions. If you need writing or associating with a concept/theory, it should be written directly in the discussion.

The introduction written using Times New Roman letters size 12, spaces 1.15.

RESEARCH METHODS (Uppercase, 12pt, bold, centre)

The research method contains: 1) The research method used/ type of research used, such as experimental methods, surveys, etc., as well as the research design; 2) Location of the research carried out; 3) Number of respondents; 4) Tools/ materials. Small and non-main tools don't need to mention the tools that are already common in the laboratory, such as rulers, measuring cups, pencils, etc., but write down the primary set of equipment. Physical analysis tools need to be written clearly, including brands, models/ types, specific settings, and brief procedures. As for educational research, describe the instruments used in detail, starting from the type of device, the indicators used; 5) Research procedures; 6) How to process observations or data collected using instruments and how to measure benchmark/ success benchmarks. The general method does not need to write in detail, but enough to refer to the reference book.

RESULTS AND DISCUSSION (Uppercase, 12pt, bold, centre)

The results and discussions are combined, so there is no separate "results" section with "discussions." In this section, it must contain: 1) (What/ how) whether the data presented has been processed (not raw data), can be included in tables or figures, and given information that is easy to understand. Come up with findings or research findings; 2) (Why) The data presented earlier/ finding is then discussed by relating it to the basic concepts and/ or hypotheses. The discussion made must be supported by real and apparent facts; 3) (What else) write whether there is compatibility or conflict with the results of other people's research, mainly referring to the research that has mentioned in the previous state of the art. It may also be written about the implications of both theoretical and applied research results.

Writing Equations

Each equation has an equation number that placed to the right of the equation. Explanation of the notation/ symbol of the equation explained in a narrative rather than using a list.

Example of writing the equation:

$$\mathbf{F} = m\mathbf{a}$$

(1)

Where **F** (N) is the force, *m* (kg) is the mass of the object, and **a** (m/s²) is the acceleration experienced by the object.

Image Presentation

The image presented must be clear and sharp (not broken). Each image must referred to in the text. The image title/ caption placed under the image. No need to use a frame/ border around the image. Graphics included in the picture. If the graph is in the form of bars, to distinguish between one bar with another use different patterns, do not distinguish colors.

Example of image presentation:

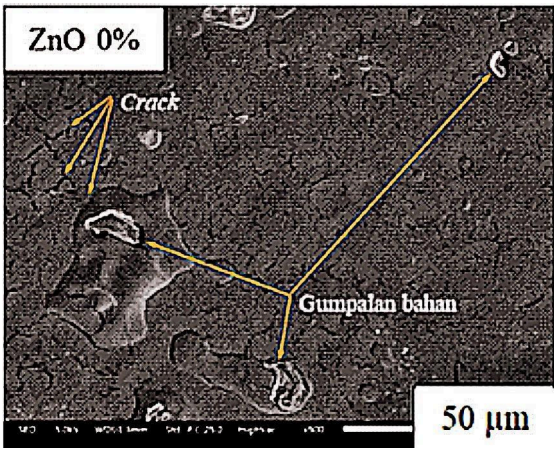


Figure 1. SEM bioplastic test result 0%, 50 μm (Sentence case, 11pt, centre)

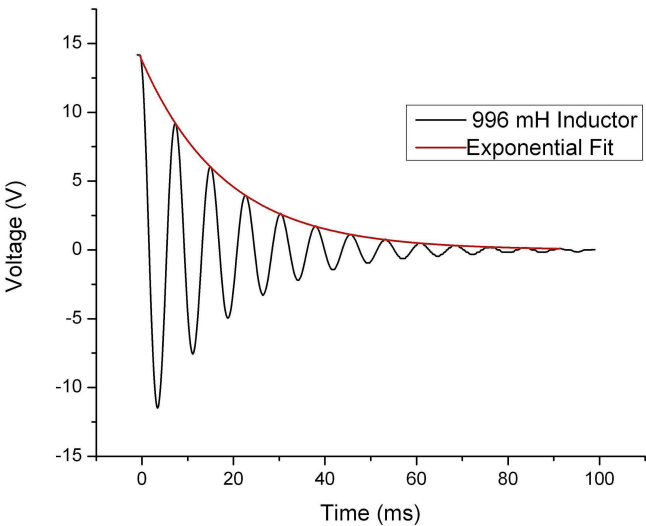


Figure 2. Time graph of the voltage at the inductor (Sentence case, 11pt, centre)

Table Presentation

Table title/ caption placed on top of the table. All text in the table must read properly. Each

table must refer to in the text. Tables cannot clip on other pages. No horizontal lines needed in the contents of the table, only the headings, and bottom edges are enough.

Example of table presentation

Table 1. Normality test result (Sentence case, 11pt, centre)

Group	Shapiro-wilk	Sig.
Experiment	0,978	0,750
Control	0,992	0,890

CONCLUSION

Conclusions are only sufficient to answer the problem or research objective. May add implications or suggestions. It should be written in paragraph form, not in the style of item list/numbering.

ACKNOWLEDGEMENT

Acknowledgments written to appropriate parties, especially to institutions or people who help with the research. This section is not required to exist.

REFERENCES

The format of citation writing and references based on the 6th edition of the American Psychological Association (APA) format. [References used are at least 30, and 80% \(from primary literature or scientific journals\) are from the last eight years. Books containing theoretical concepts \(secondary\) may use as a reference, but only a maximum of 20% attempted.](#) They are not allowed to use references from blogs or Wikipedia or other references that are not peer-reviewed. It recommended using a reference management application (EndNote, Mendeley, Zotero, etc.).

Example of writing a references:

- Kaufman, C., Perlman, R., & Speciner, M. (2015). *Network security: Private communication in a public world*. Englewood Cliffs, NJ: Prentice Hall.
- Punet, W., & Pooja, W. (2013). Effect of integrated syntax of advance organizer model and inductive thinking model on attitude towards mathematics and reaction towards integration of models. *International Journal of Education and Psychological Research*, 3(8), 15-20.
- Cock, M.D. (2012). Representation use and strategy choice in physics problem solving. *Physics Educations Research*, 8(1), 1-15. doi:10.1371/journal.per.0050289