



A Title Should Be The Fewest Possible Words That Accurately Describe The Content Of The Paper (Center, Bold, Capital Each Word 14pt)

First Author¹, Second Author², Third Author³ (10 pt)

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ABSTRACT

Purpose of the study: In simple words tell to readers about the aim of this study. No discussion, no story only aim of this study [30-50 words]

Methodology: Give name, brand, type of tools, methods, software, review, and survey that has been used to do this study. No discussion or explanation. [50-60 words]

Main Findings: Write only main results in few words. No discussion or explanation. [50-80 words]

Novelty/Originality of this study: what is new in this study that may benefit readers and how it is advancing the existing knowledge or creating new knowledge in this subject. [50-60 words]

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1. INTRODUCTION

The main text format consists of a flat left-right columns on A4 paper (quarto). The margin text from the left, right, top and bottom are 2.5 cm. The manuscript is written in Microsoft Word, single space, Time New Roman 10pt and maximum 16 pages, which can be downloaded at the website: <https://cahaya-ic.com/index.php/JETLC>

A title of article should be the fewest possible words that accurately describe the content of the paper. Omit all waste words such as "A study of ...", "Investigations of ...", "Implementation of ...", "Observations on ...", "Effect of.....", "Analysis of ...", "Design of..." etc. Indexing and abstracting services depend on the accuracy of the title, extracting from it keywords useful in cross-referencing and computer searching. An improperly titled paper may never reach the audience for which it was intended, so be specific.

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. It should be understandable to colleagues from a broad range of scientific disciplines. Organization and citation of the bibliography are made in IEEE style in sign [1], [2] and so on. The terms in foreign languages are written italic (italic). The text should be divided into sections, each with a separate heading and numbered consecutively. The section or subsection headings should be typed on a separate line, e.g., 1. INTRODUCTION. A full article usually follows a standard structure: **1. Introduction, 2. The Comprehensive Theoretical Basis and/or the**

Proposed Method/Algorithm (*optional*), **3. Method**, **4. Results and Discussion**, and **5. Conclusion**. The structure is well-known as **IMRaD** style.

Literature review that has been done author used in the chapter "Introduction" to explain the difference of the manuscript with other papers, that it is innovative, it are used in the chapter "Research Method" to describe the step of research and used in the chapter "Results and Discussion" to support the analysis of the results [2]. If the manuscript was written really have high originality, which proposed a new method or algorithm, the additional chapter after the "Introduction" chapter and before the "Research Method" chapter can be added to explain briefly the theory and/or the proposed method/algorithm [4].

2. RESEARCH METHOD

Explaining research chronological, including research design, research procedure (in the form of algorithms, Pseudocode or other), how to test and data acquisition [1]-[3]. The description of the course of research should be supported references, so the explanation can be accepted scientifically [2], [4].

Tables and Figures are presented center, as shown in Table 1 and Figure 1, and cited in the manuscript before appeared.

Table 1. ...

Variable	Category	Percentage (%)
x	Bad	8.6
y	Sufficient	12.4
z	Good	15.3



Figure 1. Xxxx

3. RESULTS AND DISCUSSION

In this section, it is explained the results of research and at the same time is given the comprehensive discussion. Results can be presented in figures, graphs, tables and others that make the reader understand easily [2], [5]. The discussion can be made in several sub-chapters.

3.1. Sub section 1

Equations should be placed at the center of the line and provided consecutively with equation numbers in parentheses flushed to the right margin, as in (1). The use of Microsoft Equation Editor or MathType is preferred.

$$E_v - E = \frac{h}{2.m} (k_x^2 + k_y^2) \dots (1)$$

All symbols that have been used in the equations should be defined in the following text.

3.2. Sub section 2

Proper citation of other works should be made to avoid plagiarism. When referring to a reference item, please use the reference number as in [3] or [4] for multiple references. The use of "Ref [5]..." should be employed for any reference citation at the beginning of sentence. For any reference with more than 3 or more authors, only the first author is to be written followed by et al. (e.g. in [6]). Examples of reference items of different categories shown in the References section. Each item in the references section should be typed using 8 pt font size [7]-[8].

4. CONCLUSION

Provide a statement that what is expected, as stated in the "Introduction" chapter can ultimately result in "Results and Discussion" chapter, so there is compatibility. Moreover, it can also be added the prospect of the development of research results and application prospects of further studies into the next (based on result and discussion).

ACKNOWLEDGEMENTS

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REFERENCES

The main references are international journals and proceedings. All references should be to the most pertinent, up-to-date sources **and the minimum of references are 30 entries** (for original research paper) and **50 entries** (for review/survey paper). References are written in **IEEE style**. For more complete guide can be accessed at (<http://ipmuonline.com/guide/refstyle.pdf>). Use of a tool such as **EndNote**, **Mendeley**, or **Zotero** for reference management and formatting, and choose **IEEE style**. Please use a consistent format for references-see examples (9 pt):

[1] Journal/Periodicals

Basic Format:

J. K. Author, "Title of paper," *Abbrev. Title of Journal/Periodical*, vol. x, no. x, pp. xxx-xxx, Abbrev. Month, year, doi: xxx.

Examples:

- M. M. Chiampi and L. L. Zilberti, "Induction of electric field in human bodies moving near MRI: An efficient BEM computational procedure," *IEEE Trans. Biomed. Eng.*, vol. 58, pp. 2787–2793, Oct. 2011, doi: 10.1109/TBME.2011.2158315.
- R. Fardel, M. Nagel, F. Nuesch, T. Lippert, and A. Wokaun, "Fabrication of organic light emitting diode pixels by laser-assisted forward transfer," *Appl. Phys. Lett.*, vol. 91, no. 6, Aug. 2007, Art. no. 061103, doi: 10.1063/1.2759475.

[2] Conference Proceedings

Basic Format:

J. K. Author, "Title of paper," in *Abbreviated Name of Conf.*, (location of conference is optional), year, pp. xxx-xxx, doi: xxx.

Examples:

- G. Veruggio, "The EURON roboethics roadmap," in *Proc. Humanoids '06: 6th IEEE-RAS Int. Conf. Humanoid Robots*, 2006, pp. 612–617, doi: 10.1109/ICHR.2006.321337.
- J. Zhao, G. Sun, G. H. Loh, and Y. Xie, "Energy-efficient GPU design with reconfigurable in-package graphics memory," in *Proc. ACM/IEEE Int. Symp. Low Power Electron. Design (ISLPED)*, Jul. 2012, pp. 403–408, doi: 10.1145/2333660.2333752.

[3] Book

Basic Format:

J. K. Author, "Title of chapter in the book," in *Title of His Published Book*, X. Editor, Ed., xth ed. City of Publisher, State (only U.S.), Country: Abbrev. of Publisher, year, ch. x, sec. x, pp. xxx-xxx.

Examples:

- A. Taflove, *Computational Electrodynamics: The Finite-Difference Time-Domain Method* in *Computational Electrodynamics II*, vol. 3, 2nd ed. Norwood, MA, USA: Artech House, 1996.
- R. L. Myer, "Parametric oscillators and nonlinear materials," in *Nonlinear Optics*, vol. 4, P. G. Harper and B. S. Wherret, Eds., San Francisco, CA, USA: Academic, 1977, pp. 47–160.

[4] M. Theses (B.S., M.S.) and Dissertations (Ph.D.)

Basic Format:

J. K. Author, "Title of thesis," M.S. thesis, Abbrev. Dept., Abbrev. Univ., City of Univ., Abbrev. State, year.

J. K. Author, "Title of dissertation," Ph.D. dissertation, Abbrev. Dept., Abbrev. Univ., City of Univ., Abbrev. State, year.

Examples:

- J. O. Williams, "Narrow-band analyzer," Ph.D. dissertation, Dept. Elect. Eng., Harvard Univ., Cambridge, MA, USA, 1993.
- N. Kawasaki, "Parametric study of thermal and chemical nonequilibrium nozzle flow," M.S. thesis, Dept.

*In the reference list, however, list all the authors for up to six authors. Use *et al.* only if: 1) The names are not given and 2) List of authors more than 6. *Example:* J. D. Bellamy *et al.*, Computer Telephony Integration, New York: Wiley, 2010.

See the examples:

REFERENCES

The main references are international journals and proceedings. All references should be to the most pertinent and up-to-date sources. References are written in **IEEE style**. Please use a consistent format for references – see examples below (9 pt):

- [1] P. Delgado, C. Vargas, R. Ackermann, and L. Salmerón, “Don’t throw away your printed books: A meta-analysis on the effects of reading media on reading comprehension,” *Educ. Res. Rev.*, vol. 25, pp. 23–38, 2018, doi: 10.1016/j.edurev.2018.09.003.
- [2] F. Reichert, D. Lange, and L. Chow, “Educational beliefs matter for classroom instruction: A comparative analysis of teachers’ beliefs about the aims of civic education,” *Teach. Teach. Educ.*, vol. 98, pp. 1–13, 2020, doi: 10.1016/j.tate.2020.103248.
- [3] I. Irwanto, E. Rohaeti, and A. K. Prodjosantoso, “A Survey Analysis of Pre-Service Chemistry Teachers’ Critical Thinking Skills,” *MIER Journal of Educational Studies, Trends & Practices*, vol. 8, no. 1, pp. 57–73, 2018. doi: 10.52634/mier/2018/v8/i1/1423.
- [4] A. Hofstein and R. Mamlok-Naaman, “High-school students’ attitudes toward and interest in learning chemistry,” *Educacion Quimica*, vol. 22, no. 2, pp. 90–102, 2011, doi: 10.1016/s0187-893x(18)30121-6.
- [5] J. F. Hair, R. E. Anderson, R. L. Tatham, and W. C. Black, *Multivariate Data Analysis*, 7th ed. United States, Pearson Education Limited, 2019.
- [6] M. Pressley and C. B. McCormick, *Advanced educational psychology for educators, researchers, and policymakers*. New York, USA: HarperCollins College Publishers, 1995.
- [7] R. G. Bröckett and R. Hiemstra, *Self-direction in adult learning: Perspectives on theory, research, and practice*. London and New York: Routledge, 2020.
- [8] B. J. Zimmerman and A. R. Moylan, “Self-regulation: where metacognition and motivation intersect,” in D. J. Hacker, J. Dunlosky, and A. C. Graesser, Eds., *Handbook of Metacognition in Education*, 2009, pp. 299–315.
- [9] G. Veruggio, “The EURON roboethics roadmap,” in *Proc. Humanoids ’06: 6th IEEE-RAS Int. Conf. Humanoid Robots*, 2006, pp. 612–617, doi: 10.1109/ICHR.2006.321337.
- [10] J. Zhao, G. Sun, G. H. Loh, and Y. Xie, “Energy-efficient GPU design with reconfigurable in-package graphics memory,” in *Proc. ACM/IEEE Int. Symp. Low Power Electron. Design (ISLPED)*, Jul. 2012, pp. 403–408, doi: 10.1145/2333660.2333752.