

Maximum Title 14 Words, Palatino Linotype 14 pt, Bold, Capitalize Each Word

Author 1^{*1}, Author 2² (Palatino Linotype, 10pt, bold)

¹Universitas Muhammadiyah Purwokerto, Indonesia (Palatino Linotype, 10pt)

²Universiti Kebangsaan Malaysia, Malaysia (Palatino Linotype, 10pt)

Email address Corresponding author (Palatino Linotype, 10pt)

 <http://dx.doi.org/10.30595/alphamath.v11i2...>

ABSTRACT (Palatino Linotype, 10pt, bold)

Abstracts are written in English, single-spaced, Palatino Linotype, 10pt. The abstract should be a concise, clear, and self-contained summary of the article, written in one paragraph of 150–300 words using precise and academic language. It must allow readers to understand the essence of the study without reading the full text; therefore, avoid jargon, uncommon abbreviations, and references. To ensure a structured presentation, authors must begin the sentences addressing the core components with the specific keyword printed in bold: **Objectives, Novelty, Urgency, Contribution, Methods, Findings, and Conclusions**. Begin with a brief background and problem statement to establish the research context. Follow this with a clear statement of the research goals (starting with Objectives). Highlight what makes the study unique (starting with Novelty), the relevance of addressing the problem (starting with Urgency), and its value to the field of mathematics education (starting with Contribution). Summarize the research design, participants, instruments, and analytical techniques concisely (starting with Methods). Present the key results clearly, quantitatively if possible (starting with Findings). Finally, state the main takeaway and emphasize the broader implications or practical significance of the study (starting with Conclusions). The abstract must be able to stand alone, offering a complete and coherent overview of the study.

Keywords: The keywords consist of 3-5 words separated using commas (,) and written sequentially according to the alphabet.

Received :

Revised :

Accepted :

Introduction

An introduction is written in English, one space, Palatino Linotype, 12pt. All introduction sections are presented in an integrated manner in paragraphs without writing subtitles. Begin the introduction by presenting the broader **context** of the study and explaining why the topic is important within the field of mathematics education. Use **valid, up-to-date, and relevant data** to describe the current situation or phenomenon being studied. Clearly explain the **background** and **reasons** for selecting the topic, and emphasize the **urgency** or significance of addressing the research problem. This section should capture the reader's attention and provide a solid foundation for understanding the study.

Provide a concise review of relevant literature by discussing **at least five previous studies** related to the topic. Summarize what other researchers have done, including

their **methods, findings, and contributions**, to establish the current **state of the art**. Ensure that the discussion is objective and focused on what is relevant to your study. Use this section to demonstrate familiarity with existing scholarship and to place your work within the context of current academic discourse.

After establishing the state of the art, identify the **gaps, limitations, or unresolved issues** in previous studies that your research seeks to address. Provide a **scientific critique** of prior methods or findings, highlighting what has not yet been explored, fully understood, or adequately solved. Without explicitly claiming it is “novel,” make it clear to readers how your approach, perspective, or findings offer **something new** to the field. Emphasize both the **novelty** and **contribution** of your research, showing how it advances understanding or provides solutions in mathematics education.

Conclude the introduction by **stating the objectives** of your study clearly and concisely. Briefly describe the **approach, methodology, or conceptual framework** used to achieve these objectives. This final paragraph should logically connect the research gap and contribution to the purpose of the study, providing a smooth transition to the next section of the article.

Rules of paragraph writing and citations include: 1) paragraph writing is not jutting; 2) between paragraphs is limited to one space; 3) writing citations using last names and years, for example (Demir-Ayaz, 2022; Moh Ghoizi Eriyanto et al., 2021; Palomares-Ruiz et al., 2021); 4) The literature review is part of the introduction, there is no need for its points; and 5) At paragraphs do not use *numbering* and *bulleting*.

Methods

The **Methods** section should provide a clear, detailed, and well-organized explanation of **how the research was conducted** so that readers can understand and, if necessary, replicate the study. Write in **English**, use **Palatino Linotype, 12 pt, single spacing**, and organize the content logically according to the type of research. Authors are encouraged to use **subheadings** if needed, such as **Research Design, Participants or Data Sources, Instruments, Procedures, Data Collection, and Data Analysis**.

Research Design

Begin by explaining the **research design** used in the study, whether qualitative, quantitative, or mixed methods. Describe the overall framework that guided the study and justify why the chosen design is appropriate for answering the research questions.

Participants or Data Sources

Describe the **participants**, **population**, or **data sources** used in the research. Include details such as the number of participants, selection criteria, and relevant demographic information. If human subjects are involved, mention any **ethics approval** or **informed consent** procedures applied to ensure research ethics compliance.

Research Instruments

Clearly explain the **instruments** or **tools** used to collect data, such as questionnaires, interview guides, observation sheets, or test items. If using previously established instruments, provide proper citations. For newly developed instruments, describe their construction, validity, and reliability.

Research Procedures

Outline the **step-by-step procedures** followed during the study, focusing on how the research problem was addressed. If the study involves a **new or modified method**, describe it in detail to ensure reproducibility. However, for widely recognized or established methods, summarize the process briefly and cite relevant references instead of repeating unnecessary details.

Data Collection Techniques

Describe **how data were collected**, including when, where, and by whom. Provide sufficient detail to allow replication but avoid excessive technical descriptions unless the novelty of the study lies in the data collection process itself.

Data Analysis Techniques

Explain the **techniques and tools** used to analyze the data, ensuring alignment with the research design and objectives. Specify whether you used statistical tests, qualitative coding procedures, or mixed-methods approaches. If any software was used, mention it explicitly (e.g., SPSS, NVivo, R).

Additional Notes

(1) Ensure that the **order of methods** matches the order of the results presented in the article. (2) When relevant, specify the **accuracy, limitations, or tolerances** of instruments and equipment. (3) Highlight any **novel aspects** of your methodological approach, as the **uniqueness and simplicity** of the method can significantly enhance the contribution of the study.

Result and Discussions

The **Results and Discussion** section should present the **research findings** clearly, analyze them in depth, and relate them to existing theories or previous studies to demonstrate the **novelty, contribution, and significance** of the work. Write in **English**, use **Palatino Linotype, 12 pt, single spacing**, and organize this section logically and systematically. Authors may present **Results** and **Discussion** in one integrated section or as two separate sections, depending on the study's complexity.

Presenting the Results (example of writing a subtitle: Palatino Linotype, 12 pt, bold)

This part answers the question “**What have you found?**” and must include only **representative results**—those directly relevant to the research questions and objectives.

Clarity and Honesty (example of writing a sub-subtitle)

Present data honestly and transparently; do not omit critical findings that could lead to misinterpretation or distrust.

Format

Results can be presented in **figures, tables, or descriptive text** depending on the nature of the data. Figures and tables should be clear, easy to understand, and properly labeled. Avoid excessive repetition between text and visuals—describe what the reader should notice rather than restating all numerical values.

Order

Present findings **chronologically** or in the same sequence as outlined in the **Methods** section to maintain logical flow.

No References

Do not cite literature in this part unless a figure or table **directly compares** your findings with those of other studies. In such cases, include the reference **within the figure or table caption** rather than in the main text.

Appendices

If extensive datasets are required to support figures or tables, include them in the **appendix** rather than the main body of the article.

Writing the Discussion

The discussion interprets your findings and explains “**What do these results mean?**” and “**How do they relate to existing knowledge?**” This is one of the most critical

parts of the manuscript, as editors and reviewers often evaluate the study's contribution based on the strength of this section.

Avoid Repetition

Do **not** simply restate the results. Instead, explain, interpret, and analyze them.

Connect to Objectives

Relate the findings back to the **research objectives** and questions stated in the introduction.

Compare with Previous Studies

Engage in a **scientific dialogue** by comparing your findings with previous research. Highlight whether your results **confirm, refine, extend, or contradict** earlier studies.

Integrate Theories

Link findings with relevant **theories, models, or frameworks** to strengthen interpretation and demonstrate scholarly depth.

Highlight Novelty and Contribution

Clearly explain what is **new** and **significant** about your findings without exaggerating claims.

Provide Explanations

If unexpected results arise, explain possible reasons and discuss both **strengths** and **limitations** of the findings.

Speculative Interpretation

Limited speculation is acceptable but must be grounded in evidence rather than unsupported assumptions.

Tips for a Strong Discussion

To produce a high-quality discussion, consider the following strategies:

Integrate Findings and Theory

Explicitly connect your results with relevant theories and conceptual frameworks.

Compare Multiple Perspectives

Present, contrast, and synthesize various expert opinions and related studies.

Emphasize Author's Perspective

Highlight your own arguments and interpretations based on the evidence.

Quantify When Possible

Use quantitative descriptions instead of vague expressions (e.g., “110°C” instead of “too hot”, “The class average is 90” instead of “The class average is very high”).

Ensure Consistency

Use terminology and abbreviations consistently throughout the manuscript—introduce all terms in the introduction before discussing them here.

Recommendations and Implications

Where appropriate, provide **practical recommendations** or propose **solutions** based on your findings.

Key Principles for Results and Discussion

In the **Results and Discussion** section, authors should present **what was found** and **what it means** in a clear, logical, and evidence-based manner. The presentation of results must follow the same sequence as described in the **Methods** section to maintain coherence and clarity. Findings should be explained thoroughly, highlighting their **novelty, urgency, and contribution** to the field without exaggerating or overstating claims. Where appropriate, use **figures and tables** to present data effectively, ensuring they are clear, concise, and well-labeled; however, the narrative should remain the primary focus, guiding readers through the interpretation of the results. Authors are encouraged to relate findings to relevant theories, previous research, and broader implications, ensuring that the discussion demonstrates both the significance of the study and its contribution to advancing knowledge in mathematics education.

Conclusion

The **Conclusion** should provide a clear, concise, and integrative summary of the research findings and their significance, written in **English**, using **Palatino Linotype, 12 pt, single spacing**, and presented in **paragraph form** without numbering or bullet points. Begin by summarizing the **main findings** of the study and ensuring they directly **answer the research objectives** stated in the introduction. Highlight how these findings **advance the field** of mathematics education from the current state of knowledge, emphasizing the **novelty, contribution, and significance** of the study without simply repeating the abstract or listing experimental results. The conclusion should also briefly restate the **key insights from the discussion**, clarifying how the findings relate to existing theories and previous research. Provide a **clear scientific justification** for the work and, where relevant, discuss its **practical implications**,

potential applications, and **contribution to knowledge** in the broader context of mathematics education. Authors are encouraged to acknowledge any **limitations** of the study to maintain transparency and scientific rigor. Finally, the conclusion may offer **recommendations** for future research by suggesting directions for further investigation or identifying areas that remain unexplored. Avoid excessive repetition or vague statements, and ensure the section presents a coherent, evidence-based synthesis that demonstrates the value of the research and its relevance for academics, practitioners, and policymakers.

Acknowledgement

The **Acknowledgment** section should recognize all parties who have contributed **significantly** to the success of the research but are **not listed as authors**. This includes individuals, institutions, and funding bodies. Authors should begin by acknowledging the **source of financial support** for the research, including the **name of the funding agency**, the **grant or contract number** (if applicable), and ensure that the statement complies with the specific guidelines provided by the funding organization. In addition, express gratitude to individuals or groups who contributed to the study in meaningful ways, such as **academic advisors, reviewers, proofreaders, laboratory technicians, data collectors, typists, or students assisting in surveys or experiments**. When acknowledging contributions, be concise, respectful, and accurate, avoiding exaggerated or unnecessary details. The acknowledgment should be written in **English**, use **Palatino Linotype, 12 pt, single spacing**, and be presented in a **single paragraph** to maintain clarity and brevity.

Author's Declaration

Author	:	Author 1: Conceptualization, Writing - Original Draft, ...
Contribution	:	Author 2: Writing - Review & Editing, ...
	:	Author 3: Validation and Supervision, ...
	:	(For further information, please refer to:
	:	https://www.elsevier.com/authors/policies-and-guidelines/credit-author-statement)
Funding Statement	:	Authors are required to provide a clear statement of all funding sources that supported the research reported in this manuscript.
Conflict of Interest	:	The authors declare no conflict of interest.
Additional Information	:	Additional information is available for this paper.

References

All manuscripts submitted to *AlphaMath: Journal of Mathematics Education* must include a minimum of thirty (30) references, of which at least eighty percent (80%) should be sourced from journal articles published within the last ten (10) years.

Priority should be given to English-language articles published in reputable, peer-reviewed journals, with strong encouragement to use sources indexed in Scopus or other internationally recognized databases to ensure scholarly rigor and credibility. Authors are required to follow the American Psychological Association (APA) 7th edition citation style consistently throughout the manuscript. Every reference cited in the text must appear in the reference list, and every item in the reference list must be cited in the manuscript. The use of personal communication should be minimized, and unpublished observations, manuscripts not yet accepted for publication, and other forms of gray literature are not permitted. Authors are fully responsible for the accuracy of all references, including the correct spelling of author names, publication years, article titles, journal titles, and pagination. Where available, Digital Object Identifiers (DOIs) or permanent links must be included to facilitate accessibility and verification. To ensure precision and consistency in formatting, the use of reference management software such as Mendeley, Zotero, or EndNote is strongly recommended. Examples of reference formatting in APA 7th edition are provided as follows:

Journal Articles

Format:

Author, A. A., & Author, B. B. (Year). Title of the article: Written in sentence case. *Name of the Journal in Title Case and Italicized*, Volume(Issue), Page range. <https://doi.org/xxxx>

Examples:

Eriyanto, M. G., Roesminingsih, M. V., Soedjarwo, S., & Soeherman, I. K. (2021). The effect of learning motivation on learning independence and learning outcomes of students in the Package C equivalence program. *IJORER: International Journal of Recent Educational Research*, 2(4), 455–467. <https://doi.org/10.46245/ijorer.v2i4.122>

Palomares-Ruiz, A., Cebrián-Martínez, A., García-Toledano, E., & López-Parra, E. (2021). Digital gender gap in university education in Spain: Study of a case for paired samples. *Technological Forecasting and Social Change*, 173, 121096. <https://doi.org/10.1016/j.techfore.2021.121096>

Smith, J. A., & Brown, L. M. (2021). Implementing project-based learning in mathematics education. *Journal of Educational Research*, 114(3), 245–258. <https://doi.org/10.1080/00220671.2021.1873245>

Authored Books*Format:*

Author, A. A. (Year). *Title of the book in sentence case and italicized* (xth ed.). Publisher Name. <https://doi.org/xxxx>

Examples:

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.

Polya, G. (1945). *How to solve it: A new aspect of mathematical method*. Princeton University Press.

Edited Book Chapters*Format:*

Author, A. A., & Author, B. B. (Year). Title of the chapter. In E. E. Editor (Ed.), *Title of the book italicized* (pp. xx–xx). Publisher Name. <https://doi.org/xxxx>

Example:

Barksdale, C., & Anderson, M. (2020). Project-based learning in the mathematics classroom. In J. Smith & L. Doe (Eds.), *Innovations in STEM education* (pp. 112–130). Springer. https://doi.org/10.1007/978-3-030-12345-6_5

Conference Proceedings*Note:*

If the proceedings are published as a book, use the authored/edited book format. If published in a regular journal, use the journal article format. For independently published online proceedings, use the format below.

Format:

Author, A. A. (Year). Title of the paper. *Title of the Proceedings Italicized*, Page range. Publisher Name. <https://doi.org/xxxx>

Example:

Setiawan, A., & Budi, R. (2022). The development of interactive e-modules for geometry learning. *Proceedings of the International Conference on Mathematics Education*, 45–52. Atlantis Press. <https://doi.org/10.2991/icme-22.2022.8>

Theses and Dissertations

Format:

Author, A. A. (Year). *Title of the dissertation/thesis italicized* [Master's thesis/Doctoral dissertation, Name of Institution]. Repository or Database Name. URL

Example:

Hidayat, R. (2023). *The influence of project-based learning models on students' mathematical literacy skills* [Master's thesis, Universitas Muhammadiyah Purwokerto]. UMP Repository. <http://repository.ump.ac.id/12345>

Webpages and Reports

Format:

Author, A. A. (Year, Month Date). *Title of the webpage/document italicized*. Website or Organization Name. URL

Example:

National Council of Teachers of Mathematics. (2020, May 15). *Principles and standards for school mathematics*. NCTM. <https://www.nctm.org/standards/>

ADDITIONAL INFORMATION:

All articles must begin on an odd-numbered page. If an author's manuscript results in an odd number of pages, a blank page will be inserted. This blank page will be included in the total page count and will incur an additional publication charge.

Presenting Figures and Tables

Figures and tables are an essential component of scientific writing, as they provide a concise and effective means of presenting research findings. Authors are encouraged to prepare figures and tables carefully before drafting the manuscript, ensuring that they are clear, accurate, and of high quality. In general, tables are used to present actual experimental results, while figures are often employed to illustrate comparisons between experimental findings, theoretical values, or results from previous studies.

Tables must be typewritten separately from the main text and formatted to fit on a single page whenever possible. Each table should be numbered consecutively using Arabic numerals (e.g., Table 1) and provided with a descriptive title. **Table titles must be written in Palatino Linotype, 11 pt, single spacing.** The content of tables must also use *Palatino Linotype*, 9 pt, single spacing. Footnotes should appear below the table body and be indicated with superscript lowercase letters (a, b, c, etc.), rather than symbols. Vertical lines should not be used. Each column must have a clear heading, and any abbreviations should be defined in the footnotes. If a table contains an extensive dataset, it should be placed in an appendix rather than within the main body of the text.

Table 1. Average of Student Self Confidence

Cycle	Average
I	61.67
II	65.35
III	70.42

Figures must also be submitted separately from the main text and numbered consecutively with Arabic numerals (e.g., Figure 1) according to their order of appearance. Figure numbers should be positioned outside the image boundaries. For multipart figures, use uppercase bold letters (A, B, C, etc.) without parentheses to designate subdivisions, both on the figure itself and in the figure legend. Each figure must include a detailed legend but should not carry a title above the image. Figures should be of high resolution, preferably in JPEG format, with a minimum quality of 300 dpi and sharp, well-balanced color settings. Axes must be clearly labeled with readable scales, symbols and datasets should be easily distinguishable, and grid lines should be subdued to avoid overshadowing the data. Authors should avoid overcrowded or unclear graphical plots. All figure captions must be written in *Palatino Linotype*, 11 pt, single spacing.



Figure 1. Image caption

If a figure includes a photograph of a student's work originally written in Indonesian, an English translation must be provided either on the right or left or bottom of the image for clarity and international readability (Figure 2).

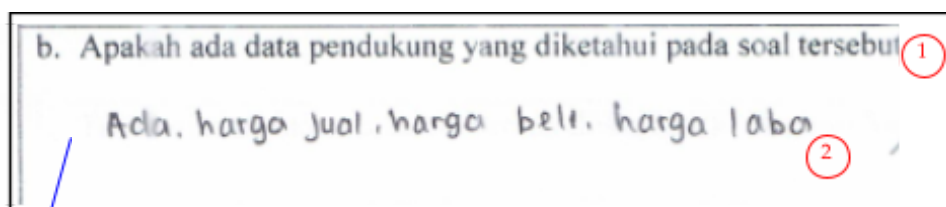


Figure 2. Answers of students with low motivation

Translate in English:

- b. Is there any supporting data that is known about the problem?
- there are, selling prices, buying prices, profit prices

Figures and tables must always be referenced in the main text in sequential order. They should be self-explanatory, well-labeled, and sufficiently detailed to be understood without excessive reference to the body text.

Equation

Equations must be prepared using Microsoft Equation Editor (not as images), numbered consecutively in parentheses (e.g., (1), (2), (3)), and aligned to the far right margin.

$$\cos \cos \alpha + \cos \cos \beta = 2 \cos \cos \frac{1}{2}(\alpha + \beta) \cos \cos \frac{1}{2}(\alpha - \beta) \quad (1)$$

All figures, tables, and equations must be cited explicitly in the text before they appear. Avoid using vague references such as 'the next figure,' 'the table above,' or 'the equation below.' Instead, refer to them directly by their number, for example, Figure 1, Table 3, or Equation (4).

Presenting Interview Findings

If interviews are identified as one of the data collection techniques in the Methods section, the Results and Discussion section must include the presentation and analysis of interview findings. Interview data should be presented selectively, systematically, and analytically rather than as full raw transcripts. Authors are encouraged to integrate participant quotations with interpretation and discussion to support arguments, illustrate themes, and strengthen the interpretation of findings.

The following guidelines should be followed when presenting interview findings:

Use concise excerpts that represent important findings, themes, or patterns relevant to the research objectives.

Present quotations in English. If the original interview was conducted in another language, authors may provide the original excerpt followed by an English translation when necessary to preserve contextual meaning.

Distinguish participant quotations from the main text using indentation, block quotations, or italic formatting for clarity and readability.

Identify participants using codes or pseudonyms (e.g., S1, T2, Participant A) to maintain confidentiality and research ethics.

Provide contextual explanation and analytical interpretation for each quotation rather than presenting quotations without discussion.

Avoid excessively long interview transcripts in the main text. Extended excerpts should be placed in appendices when necessary.

Ensure consistency in transcription style, punctuation, participant coding, and translation throughout the manuscript.

Example:

“I usually solve mathematics problems by memorizing formulas first before understanding the concepts.” (S3)