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[ARTICLE TITLE]

The article title should be concise, informative, specific, and accurately reflect the central focus of the study. Titles should contain **12–18 words and must not exceed 20 words**. Authors should avoid unnecessary introductory phrases, unexplained abbreviations, overly broad expressions, and redundant terminology. The title should clearly communicate the main research focus, mathematical or didactical context, and relevant conceptual or methodological orientation where appropriate.

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ABSTRACT

The abstract must be written in clear, precise, and academically appropriate English as a single paragraph of 200–250 words. It should provide a concise and informative account of the study, allowing readers to understand its research problem, objective, methodological approach, principal findings, and scholarly contribution without referring to the full manuscript. The abstract should address the following five elements:

1. Background and Research Problem. Briefly establish the research context and identify the specific problem, phenomenon, or unresolved issue that motivates the study. Emphasize the research problem rather than presenting broad or generic background information.
2. Research Objective. State the primary objective or research question explicitly. Ensure that it directly addresses the identified problem and is consistent with the research design and scope of the study.
3. Methods. Summarize the research design, participants or data sources, relevant instruments or data collection procedures, and principal analytical techniques. Include only the methodological information necessary to understand how the research objective was addressed.
4. Principal Results. Present the most significant findings clearly and objectively. Report relevant numerical evidence, statistical results, effect sizes, or confidence intervals where appropriate. For qualitative, theoretical, design-based, and other non-quantitative studies, summarize the central findings, patterns, or analytical outcomes supported by the evidence. Give priority to substantive findings rather than descriptions of research activities.
5. Conclusion and Scholarly Contribution. Explain the significance of the findings in relation to the research objective and identify the study's specific contribution. Depending on its focus, the contribution may advance understanding of mathematical knowledge, mathematical thinking and learning, didactical phenomena, teaching–learning processes, the design and analysis of mathematics learning environments, or other relevant dimensions of mathematics education. The contribution must be clearly grounded in the study's findings and appropriate to its theoretical and methodological scope.

The abstract must demonstrate logical coherence among the research problem, objective, methods, findings, and conclusion. Its content should reflect the actual focus and contribution of the manuscript, with particular attention to the mathematical or didactical significance of the research. Avoid citations, undefined abbreviations, unnecessary methodological details, repetitive statements, unsupported generalizations, and claims that exceed the scope of the research design or available evidence. Do not introduce information, findings, or conclusions that are not presented in the main manuscript. The abstract should communicate the study's substantive scholarly contribution rather than merely describe the research activities undertaken.

Keywords: Provide 3–5 specific and relevant keywords, separated by semicolons. Select terms that represent the study's central concepts, mathematical topics, theoretical perspectives, or methodological approaches. Avoid overly broad terms and unnecessary repetition of words already prominent in the title

How to Cite: [To be completed by the journal after acceptance/publication using the final bibliographic metadata and DOI, if available.]

INTRODUCTION

The Introduction should establish a clear, coherent, theoretically grounded, and evidence-based rationale for the study. It should develop a logical progression from the specific research problem to relevant theoretical and empirical literature, identify an unresolved issue in existing knowledge, and establish the study's rationale, objectives, and intended scholarly contribution. Authors should construct a critical argument demonstrating why the research is necessary and how it may advance understanding of mathematical knowledge, mathematical thinking and learning, didactical phenomena, teaching–learning processes, or other relevant dimensions of mathematics education. Depending on the nature and design of the study, the Introduction should address the following elements:

1. **Research Problem and Significance.** State the specific mathematical, educational, or instructional problem investigated in the study. Explain its relevance and significance using credible empirical evidence, theoretical arguments, policy documents, or authoritative scholarly sources, as appropriate. The problem may concern mathematical knowledge, students' mathematical thinking and learning, teachers' instructional practices, classroom interactions, didactical situations, curriculum, assessment, or the design and use of learning resources. Move beyond general statements about the importance of mathematics education and identify the particular phenomenon, difficulty, or challenge that warrants systematic investigation.
2. **Theoretical and Conceptual Positioning.** Introduce and critically explain the theories, concepts, or analytical frameworks underpinning the study. Clarify their relevance to the research problem and demonstrate how they inform the formulation of research questions, the selection of analytical perspectives, or the interpretation of the phenomenon under investigation. Where relevant, explain how the theoretical positioning relates to mathematical knowledge, mathematical thinking and learning, didactical processes, or the organization of mathematics teaching and learning. Integrate theoretical perspectives analytically into the research rationale rather than presenting them merely as descriptive background. The journal does not prescribe a particular theoretical framework; its suitability should be justified in relation to the research problem and objectives.
3. **Critical Synthesis of Previous Research.** Critically synthesize relevant empirical and theoretical studies to establish the current state of knowledge. Identify patterns, convergences, contradictions, methodological differences, and limitations across previous studies. Explain how existing research has contributed to understanding the topic and where its explanations, findings, or approaches

remain insufficient. Depending on the research focus, consider relevant developments in mathematical knowledge, cognition and learning, didactical situations, instructional design, teacher practices, curriculum, assessment, and learning resources. Prioritize thematic and analytical synthesis over sequential descriptions of individual publications. Give appropriate consideration to seminal contributions and recent scholarly developments.

4. **Research Gap, Novelty, and Rationale.** Derive a specific, clearly articulated, and defensible research gap from the critical synthesis of previous literature. Identify what remains insufficiently understood, theoretically unresolved, empirically unexplained, methodologically constrained, or contested. Explain how the present study addresses this gap and specify the nature of its novelty, whether conceptual, theoretical, empirical, methodological, or related to the analysis or design of mathematics teaching and learning. Distinguish substantive novelty from merely applying an established approach to a different population, institution, or geographical setting. The rationale should establish why addressing the identified gap is necessary for advancing knowledge or improving understanding of the phenomenon under investigation.
5. **Research Objectives, Questions, or Hypotheses.** State the primary research objective and, where appropriate, the research questions or hypotheses explicitly. These should emerge logically from the identified research gap and remain consistent with the theoretical positioning, research design, and analytical approach. Ensure that the objectives are sufficiently focused and can be addressed through the evidence and methods employed in the study.
6. **Scholarly Contribution and Significance.** Explain the specific contribution the study is intended to make to Mathematics Didactics or relevant areas of Mathematics Education research, theory, methodology, or educational practice. Depending on its focus, the study may extend, refine, challenge, or provide new empirical insight into existing understandings of mathematical knowledge, mathematical thinking and learning, didactical phenomena, teaching–learning processes, or the design and analysis of mathematics learning environments. Distinguish theoretical, empirical, methodological, and practical contributions where relevant. The proposed contribution should be clearly connected to the research gap, proportionate to the scope of the study, and justified by the preceding argument.

Authors should use relevant, credible, and sufficiently current scholarly sources, including peer-reviewed empirical studies and seminal theoretical works where appropriate. All substantive claims about previous research, educational conditions, and theoretical perspectives should be supported by appropriate evidence. Citations should be integrated into a coherent scholarly argument rather than used as isolated references or descriptive lists of publications.

The Introduction should maintain logical continuity among the research problem, theoretical positioning, literature synthesis, research gap, objectives, and intended contribution. Avoid generic opening statements, unsupported generalizations, repetitive explanations, superficial literature reviews, and claims of novelty based solely on geographical or institutional context. The section should conclude with a clear statement of the study's purpose and its intended scholarly contribution, without introducing findings or conclusions that belong to subsequent sections. No fixed paragraph count or prescribed subsection structure is required. The length and organization should be proportionate to the complexity of the research problem, research design, and overall scope of the manuscript.

METHOD

The Method section should provide a transparent, systematic, and sufficiently detailed account of the research approach, design, methodological decisions, data sources or materials, research procedures, and analytical strategies employed to address the research objectives or questions. Authors should explain not only what procedures were undertaken but also why the selected methodological approaches were appropriate for the research problem and the type of knowledge the study seeks to develop. The section must demonstrate clear alignment among the research objectives, theoretical or analytical framework, sources of evidence, research procedures, and methods of analysis. Its organization and level of detail should reflect the nature and requirements of the research design.

Depending on the research approach and design, the Method section should address the following elements:

1. **Research Approach, Design, and Context.** Describe the research approach and design, including the relevant institutional, educational, mathematical, or research context. Explain and justify the selection of the research design in relation to the research objectives or questions. For empirical studies, identify the research setting and relevant contextual characteristics. For design-based, developmental, or intervention studies, explain the design rationale, development framework, design principles, or intervention structure, as appropriate. For theoretical, conceptual, documentary, or review-based studies, clarify the analytical orientation and the rationale for the selected approach. Where relevant, identify the research period, intervention conditions, comparison groups, or contextual factors that may influence the interpretation of the findings.
2. **Participants, Data Sources, and Research Materials.** Identify the study population, participants, sampling strategy, sample size, selection criteria, and relevant participant characteristics, as appropriate. Explain the rationale for participant selection, sampling procedures, and sample size where applicable. For studies involving documentary sources, mathematical tasks, textbooks, curricula, classroom interactions, instructional resources, student work, digital learning materials, datasets, or other forms of evidence, specify their origins, selection criteria, scope, and relevance to the research objectives. For systematic reviews and meta-analyses, describe the databases, search strategies, eligibility criteria, and study selection procedures. For theoretical or conceptual studies, identify the principal sources, concepts, or bodies of literature examined and explain the basis for their selection.
3. **Data Collection, Development, and Research Procedures.** Describe the instruments, research materials, tasks, protocols, or other procedures used to generate, collect, select, or develop the evidence examined in the study. Explain how instruments or materials were developed, adapted, validated, and implemented, as appropriate. Provide a systematic account of the research procedures, including relevant stages, implementation conditions, and evidence collection processes. For intervention-based studies, describe the instructional approach, implementation procedures, duration, learning activities, and comparison conditions where relevant. For design-based and developmental studies, explain the stages of design, development, implementation, testing, and revision, as applicable. For documentary, theoretical, and review-based studies, describe the procedures for identifying, selecting, organizing, and examining the relevant sources. Include sufficient information to clarify how the evidence was generated or obtained and how it addresses the research objectives or questions.

4. **Data Analysis and Analytical Procedures.** Explain the analytical framework and procedures used to examine the collected or selected evidence. Identify the statistical techniques, coding procedures, analytical stages, mathematical analyses, didactical analyses, synthesis methods, or interpretive strategies employed, as appropriate to the research design. For quantitative studies, report relevant procedures for instrument evaluation, measurement quality, statistical assumptions, hypothesis testing, and effect-size estimation where applicable. For qualitative studies, describe the coding process, analytical procedures, and strategies for establishing credibility or trustworthiness, as appropriate. For mixed-methods studies, explain how quantitative and qualitative evidence were integrated and how this integration addressed the research objectives. For design-based or didactical research, clarify how design principles, instructional sequences, classroom processes, or learning trajectories were analyzed and evaluated, where relevant. For systematic reviews and meta-analyses, specify the procedures for evidence synthesis, quality appraisal, and statistical aggregation, as applicable. For theoretical and conceptual studies, explain the analytical procedures used to develop, compare, interpret, or refine concepts and theoretical arguments. Identify the software and version used where relevant.
5. **Methodological Rigor and Research Quality.** Explain the procedures used to ensure the rigor, credibility, validity, reliability, or trustworthiness of the research, as appropriate to its design. For quantitative studies, address relevant evidence of measurement quality and the appropriateness of analytical procedures. For qualitative studies, describe strategies such as triangulation, member checking, audit trails, or other relevant procedures where applicable. For design-based and developmental studies, explain how design quality, implementation, and iterative refinement were examined. For theoretical, documentary, and review-based studies, clarify the criteria for source selection, analytical consistency, and the traceability of interpretations or synthesis. Authors should report only procedures that were actually undertaken and should justify quality assurance strategies in relation to the methodological characteristics of the study.
6. **Research Ethics.** Report relevant ethical approval, informed consent procedures, confidentiality safeguards, and measures taken to protect participants and research data. Explain how ethical considerations were addressed throughout the research process, particularly when studies involve students, teachers, children, or other potentially vulnerable participants. For studies involving publicly available documents, published literature, or non-human data sources, explain relevant ethical considerations where applicable. Where formal ethical approval was not required, provide an appropriate explanation based on applicable institutional or regulatory requirements. Authors should ensure that research procedures comply with relevant ethical standards and institutional policies.

The Method section should prioritize methodological rigor, transparency, and alignment among the research objectives, theoretical or analytical framework, sources of evidence, research procedures, and analytical strategies. Authors should provide sufficient methodological detail to enable readers to evaluate the appropriateness and credibility of the research and, where applicable, reproduce or independently assess the research procedures and analytical decisions.

Methodological reporting requirements should be adapted to the specific research approach and design. Systematic reviews and meta-analyses, design-based research, didactical design research, developmental studies, experimental and quasi-experimental studies, qualitative and quantitative investigations, mixed-methods research, and theoretical or conceptual studies should follow reporting practices appropriate to their respective methodologies. Authors should avoid unnecessary procedural

descriptions, unsupported methodological claims, and information that cannot be verified from the actual research process. No single research design, theoretical framework, analytical tradition, or methodological approach is prescribed by the journal; methodological choices must be appropriate, clearly justified, and consistent with the study's objectives and intended scholarly contribution.

RESULT

The Results section should present the research findings clearly, systematically, objectively, and in direct alignment with the research objectives, questions, or hypotheses. Authors should organize the findings according to the research design and analytical approach, emphasizing the evidence that addresses the study's central focus and intended scholarly contribution. In Mathematics Didactics and related areas of Mathematics Education, findings may concern mathematical knowledge, students' mathematical thinking and learning, problem-solving processes, didactical phenomena, classroom interactions, instructional practices, learning resources, or the design and evaluation of mathematics teaching and learning environments. The presentation should distinguish reported findings from their interpretation and provide sufficient evidence to enable readers to evaluate the accuracy, relevance, and significance of the results.

Depending on the research design and analytical approach, the Results section should address the following elements:

1. **Presentation and Organization of Findings.** Present the principal findings in a logical and coherent sequence that directly addresses the research objectives, questions, or hypotheses. Organize the results according to relevant analytical dimensions, research stages, variables, themes, mathematical concepts, or didactical phenomena, as appropriate. Prioritize findings that are substantively relevant to the research problem and ensure that the presentation reflects the actual evidence obtained through the research process. The organization should make clear how each set of findings contributes to answering the research questions.
2. **Empirical Evidence, Tables, Figures, and Mathematical Representations.** Present relevant empirical data, comparisons, patterns, relationships, and other findings using appropriate narrative descriptions, tables, figures, diagrams, models, or mathematical representations. Number tables and figures consecutively and refer to each explicitly in the text. Place table titles above tables and figure captions below figures. Ensure that all visual representations are accurate, clearly labeled, readable, and directly relevant to the research objectives. Tables and figures should complement the narrative rather than duplicate information unnecessarily. Provide appropriate notes, definitions, units, and data sources where necessary. For studies of mathematical thinking, reasoning, and problem solving, include relevant student work, solution strategies, mathematical arguments, or representations where these provide essential evidence for the findings.
3. **Statistical Results and Mathematical Reporting.** For quantitative studies, report the statistical analyses accurately using appropriate notation and sufficient supporting information. Include relevant descriptive statistics, test statistics, degrees of freedom, p-values, effect sizes, confidence intervals, or other analytical indicators where applicable. Report the results of statistical assumptions and measurement evaluations when relevant to the analytical procedures. For studies involving mathematical reasoning, problem solving, mathematical modelling, or mathematical knowledge, present relevant mathematical processes, representations, patterns, structures, or solution evidence clearly and accurately. Define symbols at their first occurrence and maintain

consistent mathematical notation throughout the manuscript. Interpretive claims about mathematical strategies or conceptual understanding should be supported by the mathematical evidence presented.

4. **Qualitative, Didactical, and Integrated Findings.** For qualitative studies, present the principal themes, categories, patterns, or interpretive findings supported by relevant empirical evidence, such as interview excerpts, classroom observations, teacher–student interactions, students' written work, instructional materials, or other research sources. Where relevant, report findings concerning learning processes, classroom interactions, didactical situations, teaching practices, or the development of mathematical understanding. Explain the relationship between the identified findings and the research questions without replacing empirical evidence with unsupported interpretations. For mixed-methods studies, present quantitative and qualitative findings systematically and demonstrate their integration where relevant to the research objectives.
5. **Accuracy, Transparency, and Consistency of Findings.** Ensure that all reported findings are consistent with the data sources, research procedures, and analytical methods described in the Method section. Report relevant unexpected, contradictory, negative, or non-significant findings where appropriate. Distinguish empirical observations and analytical results from theoretical explanations or broader interpretations, unless the Results and Discussion sections are intentionally integrated. Avoid selective reporting, unsupported claims, redundant numerical descriptions, and conclusions that exceed the available evidence.

The Results section should provide a transparent and evidence-based account of the study's findings. Authors should prioritize substantive results relevant to the research objectives and the study's mathematical or didactical focus, while avoiding unnecessary repetition of methodological procedures or extensive interpretation that belongs in the Discussion section. All numerical values, statistical results, mathematical expressions, tables, figures, diagrams, and qualitative evidence must be accurate and consistent throughout the manuscript.

The organization and level of detail should be adapted to the specific research design. Authors should select appropriate forms of evidence and analytical presentation rather than follow a uniform reporting structure. For systematic reviews and meta-analyses, report the results of study selection, characteristics of the included evidence, quality appraisal where applicable, and the principal findings of the synthesis. For design-based and didactical design research, present relevant design outcomes, implementation evidence, classroom processes, and findings from iterative evaluation or refinement, as appropriate. For development studies, report relevant evidence concerning product validity, practicality, effectiveness, or other evaluation criteria consistent with the stated research objectives and design. For theoretical and conceptual studies, present the principal analytical results, conceptual developments, theoretical propositions, or refinements supported by the analysis. Specialized research designs should follow reporting practices appropriate to the methodology employed.

DISCUSSION

The Discussion section should provide a critical, theoretically informed, and evidence-based interpretation of the research findings. Authors should explain the meaning and significance of the principal findings, examine their relationship with relevant theoretical perspectives and previous studies, and clarify how the findings contribute to advancing knowledge in Mathematics Didactics and related areas of Mathematics Education. Rather than repeating the Results section, the Discussion should

develop reasoned explanations of the observed patterns, relationships, processes, or phenomena. Interpretations must remain grounded in the reported evidence and consistent with the research objectives, methodological approach, and scope of the study.

Depending on the research design and nature of the findings, the Discussion should address the following elements:

1. **Interpretation of Principal Findings.** Explain the meaning and significance of the main findings in direct relation to the research objectives, questions, or hypotheses. Identify the most important patterns, relationships, differences, or phenomena revealed by the evidence. Discuss what the findings indicate about the mathematical, educational, or didactical problem under investigation. Depending on the research focus, consider their significance for understanding mathematical knowledge, students' mathematical thinking and learning, problem-solving processes, classroom interactions, instructional practices, or the design of mathematics learning environments. Go beyond restating numerical results, qualitative themes, or descriptive observations by developing clear and logically supported interpretations.
2. **Theoretical Explanation and Underlying Mechanisms.** Examine how relevant theoretical perspectives, conceptual frameworks, or established principles help explain the observed findings. Discuss plausible mechanisms, processes, and contextual conditions that may account for the identified patterns or relationships. Where appropriate, explain how the findings support, extend, refine, or challenge existing theoretical assumptions concerning mathematical knowledge, learning processes, didactical situations, or mathematics teaching and learning. Distinguish evidence-supported explanations from hypotheses or interpretations that require further investigation. Avoid speculative causal explanations that exceed the research design or available evidence.
3. **Critical Comparison with Previous Studies.** Situate the findings within the relevant body of empirical and theoretical literature. Identify areas of agreement, disagreement, convergence, or divergence with previous research and explain plausible reasons for these similarities or differences. Consider differences in theoretical perspectives, research designs, participants, mathematical content, educational contexts, instructional conditions, and analytical approaches where relevant. Use previous studies to develop a critical scholarly dialogue rather than merely confirm that the findings are consistent with earlier research. Explain how the present findings extend, refine, challenge, or qualify existing knowledge in Mathematics Didactics or relevant areas of Mathematics Education.
4. **Theoretical, Methodological, and Practical Implications.** Explain the implications of the findings for Mathematics Didactics research, relevant theoretical development, research methodology, and educational practice, as appropriate. Clarify what new empirical insights, theoretical refinements, methodological contributions, or instructional implications emerge from the study. Depending on its focus, discuss implications for understanding mathematical knowledge and learning, analyzing didactical phenomena, designing teaching and learning situations, developing instructional resources, informing teacher practices, or evaluating mathematics learning environments. For practical implications, identify the relevant educational contexts, stakeholders, or instructional conditions to which the findings may apply. Ensure that all implications are proportionate to the research design, empirical evidence, and scope of the study. Avoid general recommendations that are not directly supported by the findings.

5. **Limitations and Directions for Future Research.** Acknowledge methodological, theoretical, empirical, contextual, or analytical limitations that may influence the interpretation, robustness, or transferability of the findings. Explain how these limitations affect the conclusions that can reasonably be drawn from the study. Identify specific and relevant directions for future research that emerge from the findings, theoretical considerations, or methodological limitations. Future research recommendations should be sufficiently focused and logically connected to the unresolved issues identified in the present study. Where appropriate, indicate how further research could extend the investigation to other mathematical topics, learning contexts, theoretical perspectives, or research designs.

The Discussion should maintain a coherent relationship among the research findings, theoretical explanations, previous research, and the study's principal scholarly contribution. Authors should prioritize analytical depth, critical engagement with scholarly literature, and evidence-based interpretation. The contribution should be made explicit by explaining what the findings add to existing knowledge, rather than merely claiming that the study is relevant or original. Avoid simply repeating the Results section, presenting literature comparisons without analytical explanation, introducing unsupported claims, or making causal assertions that are not justified by the research design.

The length and organization of the Discussion should be proportionate to the complexity of the findings, research design, and manuscript scope. Authors may organize the section using appropriate subheadings where these improve clarity and coherence. For studies that intentionally integrate Results and Discussion, present empirical findings and their interpretations together while maintaining a clear distinction between reported evidence and interpretation. The organization should allow readers to identify the principal findings, understand their theoretical and empirical significance, and recognize the study's contribution and limitations.

CONCLUSION

The Conclusion section should provide a concise, coherent, and evidence-based synthesis of the study's principal findings and scholarly contribution. It should directly address the research objectives, questions, or hypotheses and clarify what the study establishes about the investigated mathematical, educational, or didactical problem. Depending on the research focus, the conclusion should communicate what has been learned about mathematical knowledge, mathematical thinking and learning, didactical phenomena, teaching–learning processes, or the design and analysis of mathematics learning environments. Rather than repeating the Results or Discussion sections, the Conclusion should integrate the most important findings into a clear statement of what the study establishes and why it matters for Mathematics Didactics or relevant areas of Mathematics Education.

The Conclusion should address the following elements:

1. **Synthesis of Principal Findings.** Summarize the central findings in direct response to the research objectives or questions. Highlight the most significant empirical patterns, relationships, processes, or analytical insights established through the study. The synthesis should reflect the overall meaning of the findings rather than reproduce individual statistical results, qualitative excerpts, mathematical procedures, or detailed analytical descriptions. Ensure that all concluding statements are consistent with the evidence reported in the Results section and interpreted in the Discussion.
2. **Scholarly Contribution.** Clearly articulate the principal contribution of the study to empirical knowledge, theoretical understanding, methodological development, or Mathematics Didactics and

related educational practice, as appropriate. Explain what the findings add to existing knowledge and how they advance understanding of the research problem. Depending on the study's focus, the contribution may concern mathematical knowledge, students' mathematical thinking and learning, didactical phenomena, instructional processes, or the design and analysis of mathematics teaching and learning environments. Claims of originality, significance, or generalizability should be proportionate to the research design, evidence, and scope of the study.

3. **Implications and Recommendations.** Present the most relevant implications for Mathematics Didactics research, mathematics teaching and learning, curriculum development, assessment, instructional design, or educational practice, as appropriate. Where relevant, provide focused recommendations for educators, researchers, or other stakeholders. Recommendations should follow logically from the findings and remain sensitive to the educational context and the study's limitations. Identify future research directions only where they provide a meaningful extension of the present findings or address unresolved issues arising from the study.

The Conclusion should maintain a clear distinction between evidence-supported conclusions and broader recommendations. Avoid introducing new empirical findings, analytical results, theoretical arguments, or references that have not been established in the preceding sections. Do not make unsupported causal claims, overgeneralize beyond the study's participants or context, or repeat the Abstract and Discussion verbatim. Limitations should be addressed in the Discussion and need not be restated extensively in the Conclusion.

The section should be concise and proportionate to the scope and complexity of the study. No fixed paragraph count is required; however, authors should ensure that the Conclusion provides a definitive response to the research objectives or questions and clearly communicates the study's principal scholarly contribution to Mathematics Didactics or its relevant area of Mathematics Education

ILLUSTRATIVE REPORTING EXAMPLES

The following examples illustrate the recommended presentation of empirical evidence, mathematical representations, statistical results, and analytical findings in manuscripts submitted to the Jurnal Didactical Mathematics. They are intended to guide the clarity, accuracy, consistency, and scholarly presentation of research findings across different methodological approaches. Authors should select and adapt these formats according to their research objectives, mathematical content, analytical procedures, and types of evidence. The examples are illustrative and should not be interpreted as mandatory analytical procedures or as substitutes for actual research findings.

1. Table Presentation

Tables should be used to organize empirical data, summarize analytical results, and facilitate comparisons or identification of relevant patterns. Each table should have a consecutive number and a concise, informative title placed above it. Column headings should be clear, units and statistical abbreviations should be defined where necessary, and notes or data sources should be provided below the table when applicable. Tables should be referred to explicitly in the manuscript text and should present information that is analytically relevant to the research objectives.

Avoid unnecessary vertical lines, excessive decimal places, redundant information, and tables that merely reproduce information already explained in the narrative.

Example 1. Descriptive Statistical Results

Table 1. Descriptive Statistics of Students' Mathematical Achievement

Measurement	N	Mean	SD
Pre-test	30	62.40	8.15
Post-test	30	78.20	7.42

Note. Values are illustrative and do not represent actual research findings.

Example of in-text reference: "As presented in Table 1, the mean achievement score increased from 62.40 at pre-test to 78.20 at post-test."

Example 2. Qualitative Findings

Table 2. Categories of Students' Mathematical Reasoning

Analytical Category	Observed Characteristics	Illustrative Evidence
Procedural reasoning	Applies mathematical procedures without sufficient justification	Executes an algorithm without explaining why it is appropriate
Relational reasoning	Connects mathematical representations and relationships	Explains the relationship between a ratio and its equivalent representation
Integrated reasoning	Coordinates procedures, representations, and mathematical justification	Uses multiple representations and justifies the validity of a solution

Note. Categories and descriptions are illustrative. Actual categories should emerge from the analytical framework and research evidence.

2. Figures and Graphs

Figures and graphs should be used to communicate patterns, trends, comparisons, relationships, or processes that are difficult to convey efficiently through narrative descriptions or tables. Each figure should be numbered consecutively and accompanied by a concise caption placed below it. Figures should be positioned close to their first discussion in the text and prepared at a resolution suitable for publication.

Graphs should include clearly identified axes, appropriate scales, units where applicable, and legends when necessary. Authors should ensure that graphical representations accurately reflect the underlying data and do not exaggerate differences or imply relationships that are not supported by the analysis.

Example 3. Graphical Presentation of Learning Outcomes



Figure 1. Illustrative Comparison of Pre-test and Post-test Achievement

The figure may present the mean scores of two measurements using an appropriate graph. Authors should identify the measurement conditions, numerical scale, and relevant statistical information where necessary. Example of in-text reference: "Figure 1 illustrates the difference in mean achievement between the pre-test and post-test measurements."

3. Mathematical Diagrams and Representations

Mathematical diagrams, conceptual models, geometric constructions, and other visual representations may be included when they provide relevant evidence or clarify mathematical ideas, relationships, and reasoning processes. Such representations are particularly relevant to studies investigating mathematical understanding, problem-solving, mathematical communication, reasoning, modelling, and didactical processes. Authors should ensure that mathematical diagrams are accurate, clearly labeled, and consistent with established mathematical conventions. Symbols, variables, geometric elements, and relationships should be defined where necessary. Diagrams should serve an analytical or explanatory purpose rather than merely provide decoration.

Examples may include:

- Geometric diagrams illustrating mathematical properties, constructions, or relationships.
- Conceptual representations showing connections among mathematical concepts.
- Multiple representations linking symbolic, graphical, numerical, and verbal forms.
- Students' mathematical work illustrating reasoning strategies or misconceptions.
- Learning trajectories or didactical models representing instructional processes.

When figures contain students' written work, classroom records, or other identifiable materials, authors must protect participant confidentiality and comply with applicable research ethics requirements.

4. Mathematical Symbols and Notation

Mathematical symbols and notation should follow established mathematical conventions and remain consistent throughout the manuscript. Use italic type for variables and mathematical quantities where conventionally appropriate, while retaining upright type for descriptive labels, mathematical operators, and standard function names.

All non-standard or study-specific symbols should be defined at their first occurrence. Subscripts, superscripts, Greek letters, operators, and indices should be formatted consistently. Authors should

avoid introducing unnecessary notation or using the same symbol to represent different mathematical quantities within the same manuscript.

Example 4. Common Mathematical and Statistical Notation

Symbol	Description
(x_i)	Individual observation
$(\bar{x})$	Sample mean
(s)	Sample standard deviation
(μ)	Population mean
(σ)	Population standard deviation
(r)	Pearson correlation coefficient
(N)	Population size or total number of observations, as defined in context
(n)	Sample size
$(\sum)$	Summation operator
$(\sqrt{x})$	Square-root operator
$(\in)$	Element-of relation
$(\subseteq)$	Subset relation

The meaning of each symbol should be determined by its mathematical context and explicitly clarified when ambiguity is possible.

5. Mathematical Equations and Formulas

Displayed equations should be used when mathematical expressions are central to the analysis, explanation, or derivation of the research findings. Equations should preferably be created using the Microsoft Word equation editor or an equivalent mathematical typesetting tool. Number equations consecutively only when they are referred to in the manuscript. Define all relevant symbols and parameters at their first occurrence.

Example 5. Mathematical and Statistical Expressions

Sample mean:

$$\left[\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i\right]$$

Sample standard deviation:

$$\left[s = \sqrt{\frac{\sum_{i=1}^{n}\left(x_i - \bar{x}\right)^2}{n-1}}\right]$$

Pearson correlation coefficient:

$$\left[r = \frac{\sum_{i=1}^{n}\left(x_i-\bar{x}\right)\left(y_i-\bar{y}\right)}{\sqrt{\sum_{i=1}^{n}\left(x_i-\bar{x}\right)^2 \sum_{i=1}^{n}\left(y_i-\bar{y}\right)^2}} \right]$$

For equations used in the analysis, authors should explain the relevant variables, parameters, and assumptions. Equations should not be included merely for the purpose of displaying familiar formulas when their use is not relevant to the research.

6. Statistical and Qualitative Reporting

Statistical and qualitative findings should be reported using conventions appropriate to the analytical approach and research design. Authors should provide sufficient information to enable readers to understand and evaluate the reported findings.

For quantitative analyses, report relevant descriptive statistics, test statistics, degrees of freedom, exact p-values where appropriate, effect sizes, confidence intervals, and other analytical indicators according to the statistical procedure employed. Distinguish statistical significance from practical or educational significance. Avoid interpreting a p-value as a measure of effect magnitude.

For qualitative analyses, present themes, categories, or interpretive findings with sufficient empirical support. Include relevant excerpts, classroom observations, students' mathematical work, or documentary evidence where appropriate. Participant identifiers should be anonymized.

Example 6. Inferential Statistical Reporting

"The paired-samples t-test indicated a statistically significant difference between pre-test and post-test scores, $(t(29) = 5.42,\ p < .001,\ d = 0.99)$."

Note. The values are illustrative. Authors should report the appropriate effect-size measure and its interpretation according to the analytical design.

For mixed-methods research, quantitative and qualitative findings should be presented in a manner that makes their relationship and integration clear, where applicable. All examples in this section are provided for reporting guidance only. Authors remain responsible for selecting mathematically accurate representations, appropriate analytical procedures, and evidence that genuinely reflects their research. All illustrative numerical values and descriptions must be replaced with actual findings before manuscript submission.

HEADING AND SUBHEADING FORMATTING

Manuscripts should use a consistent heading hierarchy to organize the content and maintain a clear logical structure. JDM adopts a maximum of three heading levels within the main manuscript sections. Authors should use headings selectively and avoid excessive subdivision.

Level 1: Main Section Heading

Main section headings should be written in uppercase, bold, and left-aligned. Each main section should begin on a new line, with consistent spacing before and after the heading.

Examples:
INTRODUCTION
METHOD
RESULTS
ILLUSTRATIVE REPORTING EXAMPLES
DISCUSSION

CONCLUSION

Level 2: Subsection Heading

Level 2 headings should be written in title case, bold, and left-aligned. They should identify the principal subdivisions within a main section.

Examples:

Research Design and Context

Participants and Data Sources

Data Collection and Research Procedures

Data Analysis

Research Ethics

Level 3: Sub-subsection Heading

Level 3 headings should be written in title case, bold and italic, and left-aligned. They should be used only when further subdivision is necessary to clarify a specific topic or analytical component.

Examples:

Instrument Development and Validation

Descriptive Statistical Analysis

Qualitative Coding Procedures

General Heading Requirements

- Use a maximum of three heading levels.
- Maintain a logical and consistent hierarchy throughout the manuscript.
- Do not skip heading levels.
- Avoid creating a subsection with only one subordinate heading when further subdivision is unnecessary.
- Ensure that headings accurately reflect the content of their respective sections.
- Do not use numbering for headings unless specifically required by the journal.
- Use consistent typography, alignment, and spacing throughout the manuscript.

DECLARATIONS

Authors must provide the following declarations as a separate section before the References. Each statement should accurately reflect the circumstances of the research and the contributions made by the authors. Where a particular declaration is not applicable, authors should provide an appropriate statement indicating this. All declarations must be transparent, accurate, and consistent with the research procedures and information reported in the manuscript**.**

Section	Statement
Acknowledgments	Provide acknowledgments to individuals, institutions, or organizations that contributed to the research but do not meet the criteria for authorship. Obtain permission from individuals named in the acknowledgments where appropriate. If there are no acknowledgments, state: "The authors have no acknowledgments to declare."
Funding	Specify all funding sources that supported the research, including the name of the funding agency and grant or project number, where applicable. If the research received no specific funding, state: "This research received no

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Author Contributions	Specify each author's contribution using the Contributor Roles Taxonomy (CRediT), where applicable. Contributions should accurately reflect the work undertaken by each author. Authors should agree on the allocation of contributions and approve the final manuscript.
Conflict of Interest	Declare any financial, professional, institutional, or personal relationships that could be perceived as influencing the research or its interpretation. If no competing interests exist, state: "The authors declare no competing interests."
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REFERENCES

All references cited in the manuscript must be listed in the References section, and every entry in the reference list must be cited in the text. Authors should follow the **APA 7th edition** referencing style consistently.

Authors are encouraged to prioritize relevant, recent, and credible scholarly sources, particularly peer-reviewed journal articles that directly inform the study's theoretical framework, research design, analysis, and interpretation. Foundational works may be included where they remain conceptually or theoretically relevant.

Authors should ensure that:

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