

Characteristics of a High-Quality *JRME* Manuscript

The *Journal for Research in Mathematics Education (JRME)* seeks high-quality manuscripts that contribute knowledge to the field of mathematics education. For an author's work to be publishable, it must exhibit qualities that characterize well-conceived and well-reported research studies.

The following information illustrates characteristics of strong manuscripts that have been submitted to *JRME*. This advice for potential authors is intended to be illustrative rather than exhaustive and pertains primarily to reports of empirical studies and theoretical articles; it does not necessarily reflect what would be appropriate for research commentaries.

Inclusion of Appropriate Purpose and Rationale

- Describe a clear purpose for the study.
- Establish why the general area of study is important and how this particular study can contribute important information to the field. (One should not conduct a study simply because no such study has ever been done.)
- If examining a second context for an existing study, explain why the second study is useful. (This is not intended to suggest that replication studies are not appropriate.)

Clear Research Questions

- State research questions or research hypotheses explicitly and clearly in the manuscript. (The reader should not have to guess what the research questions were.)
Clear research questions are guided by the theoretical framework and are addressed by the data collected and analysis performed on that data.

An Informative Literature Review

- Provide a basis for doing the study that is reported.
- Synthesize studies, creating more than a listing or summary of existing studies.
- Include credible sources (e.g., peer-reviewed journal articles) rather than drawing exclusively on project reports and unpublished works. Address results of previous research along with pertinent policy documents.
- Cite from a source accurately and reflect what was published in the original source.
- Include pertinent international research literature rather than limiting the review to that of a single country.
- Cite a variety of pertinent studies, not just your own work or that of your colleagues and collaborators.
- Include important works that support and ground the research such as current research in mathematics education; foundational research that is the basis for the study; and potential works outside of mathematics education as appropriate.

A Coherent Theoretical Framework

- The study is guided by a theoretical framework that influences the study's design; its instrumentation, data collection, and data analysis; and the interpretation of its findings.
- The literature review connects to and supports the theoretical framework.
- How the theoretical framework influenced decisions about the design and conduct of the study is clear to the reader.

Clearly Described Research Methods*

Include key elements of research methodology, such as—

- from what population the subjects were drawn, how and why they were selected, and how many were included;
- information on the instructors and their backgrounds;
- when and how often the subjects were interviewed or tested;
- how many classrooms were included in the study;
- how each variable was measured;
- how research instruments were adapted or developed;
- examples of items from research instruments;
- descriptions of instructional approaches;
- examples from instructional materials;
- protocols used for classroom observation or interviews; and
- details of the procedures used to analyze qualitative data.

Sound Research Design and Methods*

Employ research design and methods appropriate for answering the study's research questions:

- Give validity and reliability data for the instruments used.
- Use appropriate statistical procedures and meet their assumptions.
- Use instruments appropriate to the study's subjects to measure outcome variables.
- Address threats to trustworthiness.
- Describe discrepant events.
- Use member checking when appropriate.

Claims About Results and Implications That Are Supported by Data*

- Provide supporting data for each claim that is made.
- Do not draw conclusions or suggest implications that inappropriately extend beyond what is reasonable based on the data.
- Interpret and contextualize the study's results.

Contribution to the Field of Mathematics Education

- The study examines some aspect of the teaching and learning of mathematics and offers new results or new insights to mathematics education that extend beyond what has been reported in prior studies.
- The study moves the field beyond current methods, instruments, or theories.
- Focus goals on understanding a phenomenon deeply rather than investigating any particular classroom, student, lesson, or content.

Clearly Explained and Appropriately Used Terms

- Clearly define terms that are likely not to be understood by many readers (e.g., educational terminology unique to a particular country or region).
- If using familiar terms in nonstandard ways, provide explanations for doing so.
- When using terms that have several possible interpretations, clearly identify which interpretation is intended.
- Avoid using terms interchangeably that have different meanings (e.g., proof, reasoning, argumentation, and justification).
- Do not treat multidimensional entities as if they were one-dimensional (e.g., “reform curricula” are not a singular entity and “reform” involves changes in curriculum, pedagogy, and assessment, not just in curriculum).

High-Quality Writing

- Provide helpful transitions so the manuscript flows well from one section to another.
- Develop ideas rather than listing collections of thoughts in paragraph form.
- Ask colleagues or employ editors to correct errors in grammar, spelling, and sentence structure.

Mathematical Accuracy

- Use mathematical terms correctly in conceptualizing their research.
- Use correct mathematics content in instructional materials, interview protocols, and written instruments.

* These items may not be applicable to manuscripts that primarily address theoretical issues.