

Editorial

***JRME* Monographs: Looking Back and Thinking Forward**

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Since its inception in 1985, the *JRME* Monograph Series has played a unique role in advancing scholarship in mathematics education. It has published, and continues to publish, manuscripts fitting one or more of the following descriptions:

- A single treatise that examines a major research issue,
- A report of a single research study that is too lengthy to be published as a journal article,
- A report of a series of coordinated studies, or
- A synthesis of a large body of research.

In this editorial, I describe how past monographs have served the four functions listed above. The purpose is to stimulate readers' thinking about aspects of their own work that might be suitable for the monograph series. I also describe a recent change in the monograph review process that is intended to increase proposal submissions.

Purpose 1: A Single Treatise That Examines a Major Research Issue

Some past *JRME* monographs have been treatises on a single major research issue. Such monographs generally bring together multiple perspectives. Monograph 4, for example, contained the thinking of several prominent scholars regarding theories of constructivism (Davis, Maher, & Noddings, 1990). Monograph 9 was a compilation of essays about qualitative research and its use in different research settings (Teppo, 1997). Monograph 11 presented multiple essays on the meanings of the specific constructs “everyday mathematics” and “academic mathematics” (Brenner & Moschkovich, 2002). In Monograph 13, which concentrated on the issue of research dissemination, multiple authors demonstrated how video could be used in communicating the results of mathematics education research (Carraher & Nemirovsky, 2005). A forthcoming monograph draws on several quantitative studies to illustrate the use of psychometrics in mathematics education (Izsák, Remillard, & Templin, in press).

It is worth noting that these *JRME* monograph treatises on a single research issue have generally grown from special conferences. Conference papers and presentations can serve as first drafts of monograph chapters. Compiling and editing a monograph is often a natural extension and continuation of the conference organizers' work. Hence, conference organizers wishing to maximize the impact of their proceedings may wish to plan with an eye toward a potential *JRME* monograph proposal.

Purpose 2: A Report of a Lengthy Research Study

Another type of manuscript suitable for the monograph series is a report of a single research study that is too lengthy to be published as a journal article. Qualitative studies involving extensive data collection often fit this description. Monograph 5 was an ethnographic study of the mathematics of carpenters that was conducted over a 6-month timespan (Millroy, 1992). Monograph 6 reported on a yearlong teaching experiment conducted in a second-grade classroom (Wood, Cobb, Yackel, & Dillon, 1993). Monograph 12 documented first-graders' learning of linear measurement within the context of design experiment research (Stephan, Bowers, Cobb, & Gravemeijer, 2004). Although lengthy qualitative studies are appropriate for the monograph series, in-depth research involving quantitative data can be suitable as well. Monograph 7, for example, reported on a cross-national study using both quantitative and qualitative analyses to compare the mathematical performance of U.S. and Chinese students (Cai, 1995).

Monographs that report on a single lengthy research study generally also serve broader purposes. Monographs 5 and 6 helped to advance our understanding of ethnographic research and teaching experiment methodology, respectively. Monograph 7 provided a set of tasks that could be incorporated into other studies and presented a method for conducting cross-national studies. Monograph 12 was intended to serve as a paradigm case of design research rather than just a report of a single study. So, lengthy studies accepted for the monograph series in the past have had broader impacts on the field. Potential authors would be well served to bear this in mind when proposing a monograph of this nature. A monograph based on a single study should advance knowledge beyond just disseminating the study results. Substantive theoretical or methodological innovations of interest to other researchers are desirable.

Purpose 3: A Report of a Series of Coordinated Studies

The first two volumes in the *JRME* Monograph Series provided examples of reports on coordinated studies. Monograph 1 reported on 11 studies that investigated students' learning within the context of mathematics games (Bright, Harvey, & Wheeler, 1985). Each of these studies employed a similar pretest–posttest design to assess students from a variety of grade levels. Monograph 2 described five studies that were conducted to investigate whether children differing in cognitive-processing capacity learned to add and subtract differently (Romberg & Collis, 1987). More recently, Monograph 14 presented different researchers' analyses of a single 6-minute video clip (Schoenfeld, 2008). Each analysis was conducted using different theoretical lenses that cumulatively portrayed the complexity of the phenomenon under investigation.

Monographs 1, 2, and 14 illustrated different ways in which studies may be “coordinated.” The Monograph 1 studies were coordinated in the sense of employing similar research methodologies. The studies in Monograph 2 built upon one another in a progressive fashion to yield an end result. Monograph 14 took almost the

opposite approach of Monograph 1 in that diverse research methodologies were employed to provide greater insight into a single phenomenon. Perhaps future monographs will further extend and deepen our understanding of what it means to coordinate mathematics education research studies.

Purpose 4: A Synthesis of a Large Body of Research

Projects with substantial grant funding often yield large bodies of research that are not easily summarized in a journal article. Monographs are well suited to disseminating results from such projects in a single representative publication. Monograph 3, for example, reported on a project focused on the Van Hiele model of thinking among adolescents (Fuys, Geddes, & Tischler, 1988). The authors described the Van Hiele levels as a theoretical model, the development of instructional modules aligned with this theory, students' and teachers' performance with the modules, and an analysis of textbooks in light of this theory. Monograph 8 presented a summary of the collective work of 22 researchers working at 17 different schools to describe the characteristics of sites of mathematics education reform (Ferrini-Mundy & Schram, 1996). Monograph 10 came about as a result of several rounds of grant funding provided to develop a curriculum incorporating Logo as a tool for teaching geometry (Clements, Battista, & Sarama, 2001). Another forthcoming monograph synthesizes the research from a longitudinal study across two research sites on children's learning of geometric measurement (Barrett, Clements, & Sarama, in press).

Findings from large-scale grant projects are often disseminated in multiple journal articles. Producing several journal articles helps build a project portfolio, which can then be used to advance the case for additional funding. It also ensures that the findings reach several different audiences. However, one disadvantage of relying on this method of dissemination alone is that the project may be portrayed in a fragmented manner. Readers must put considerable effort into synthesizing multiple reports and relating them to one another. A monograph can help readers see the big picture of a project and provide a frame of reference for understanding relationships among its multiple published studies.

The New *JRME* Monograph Review Process

Despite the advantages associated with disseminating research in monograph form, writing one is, of course, an immense undertaking. In the past, prospective *JRME* monograph authors had to submit the entire manuscript at the outset of the review process, which might have discouraged monograph submissions. Recently, the submission and review process for *JRME* monographs was changed to more closely resemble the process of submitting a book proposal. Rather than submitting the entire monograph immediately, prospective authors or editors are to send the following materials directly to the monograph series editor:

- A cover letter briefly describing the purpose of the work, the authors' or editors' background or relation to the work, the name and affiliation of all contributing

authors, and the estimated length of the complete monograph.

- An abstract of the monograph.
- A prospectus (4,500-word maximum, not including references) that describes the focus of the proposed work, situates it within the relevant literature, establishes the work's significance to the field, and explains the contribution of each chapter to the overall thesis of the monograph.
- A detailed table of contents or annotated outline that includes a brief description of each chapter.
- An appendix that includes a detailed abstract (500-word maximum) for each chapter.
- A sample chapter that would be included in the monograph (preferably the introduction chapter).

This new process is designed to encourage more authors to consider proposing monographs, while at the same time maintaining the rigorous peer review process.

When proposals are submitted, they will be reviewed by the Monograph Series Editor and four reviewers. The editor will use the reviews to make a publication decision and then communicate it to the author. It is possible to receive a revise and resubmit decision at the conclusion of each round of review. If the proposal is accepted, the author will be encouraged to submit a full manuscript that addresses comments and concerns that arose during the review process. The editor will examine the submitted manuscript to verify that requested adjustments have been made and then send it to two reviewers for feedback. The author will use this feedback to improve the manuscript and work with the editor as the manuscript is prepared for publication.

Closing Thoughts: The Value and Impact of *JRME* Monographs

There has been a large gap in time between *JRME* monographs. Before the two forthcoming monographs on psychometrics and children's measurement, no *JRME* monographs had been published since 2008. This lack of activity is unfortunate for researchers as well as for NCTM as a professional organization. *JRME* monographs are relatively inexpensive for readers to purchase as compared with the prices charged by some academic book publishers. This helps increase the readership and impact of the work reported in monographs. *JRME* monographs are also archived in JSTOR, further expanding their availability to academic audiences.

Along with helping to communicate researchers' work to a broad audience, publishing a high-quality *JRME* monograph helps NCTM maintain its position as a leader in the mathematics education research community. Given the various forces that attempt to exert influence over mathematics education in the current political climate, it is vital for NCTM to maintain a prominent position. *JRME* monographs are an important part of the portfolio NCTM can cite as evidence of leadership in mathematics education. In a similar vein, publishing a *JRME* monograph can help researchers maximize the impact of their work on the field. Hopefully, the near future holds in store a number of high-quality *JRME* monograph proposals.

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