

Know Thy Reviewers! Really?

Norman G. Lederman¹ · Judith S. Lederman¹

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As graduate students and young faculty members, all of us are usually told to “know your reviewers.” This usually occurs in a conversation concerned with where to submit a newly written manuscript, or worse, reflections about a manuscript that has been rejected for publication. This advice directly refers to the perception, and too often the reality, that reviewers and editors pass judgment on manuscripts for reasons not totally based on the quality of the manuscript (Hamilton, 1991; Siegelman, 1991). More explicitly, decisions are made based on whether the conceptual/theoretical framework and the findings of the manuscript are aligned with those of the reviewers and editor. Siegelman (1991) categorized his reviewers as assassins, zealots, and mainstreamers. If your co-editors were “assassins” this would translate into the perception that we would never accept a manuscript claiming that nature of science was learned implicitly through students doing laboratory investigations. We can honestly say that this is not, and never will be, the case. There was an article in *Science* many years ago (and we do not have the reference) in which two researchers produced two manuscripts with the same research question and design. However, the two manuscripts had fictitious data, one in agreement with currently accepted views and the other contrary to current views. These manuscripts were sent to various scientific journals and there was a statistically significant difference in the acceptance rates, with the manuscript aligned with currently held views accepted more frequently. A similar study was completed several years ago in a sociology journal. So, the validity of the advice to “know your reviewers” was empirically tested and verified. Hence, there is some truth to the value of knowing your reviewers. We would prefer that the “knowing”

✉ Norman G. Lederman
JSTE@iit.edu

¹ Chicago, IL, USA

is primarily about the reviewers' knowledge base, and not about any biases they may harbor. We make every effort possible to insure that manuscripts reviewed for publication in the *Journal of Science Teacher Education* is based exclusively on the quality of the manuscript and its potential to advance knowledge in the area of science teacher education.

Nevertheless, the responsibility of being an Editor is daunting and we know in advance that how we are viewed varies predictably among those whose manuscripts have been accepted and those who have not had successful submissions. Although we enthusiastically accept the responsibilities typically associated with journal editors, we are also committed to making our decisions with maximum input from our Associate Editors and Editorial Review Board members. We are also committed to decreasing the time authors are expected to wait for the editorial process to wind its way to completion. We are proud to say that the *Journal of Science Teacher Education* consistently boasts one of the shortest review and publication timelines in science education. We are also convinced that the review process for the journal is as fair as is humanly possible and the result is a product that best represents the interests of the membership of the organization. TRANSPARENCY is a serious goal. Consequently, this is the second year that our June editorial is dedicated to a detailed description of the editorial review process and a delineation of acceptance rates and reasons for the rejection of manuscripts. We sincerely believe the process of publishing in a scholarly journal should have utmost integrity and be as transparent as possible.

Receipt and Logging of Manuscripts

All manuscripts are processed through the Editorial Manager website. An email is sent to the primary author immediately after the manuscript is uploaded. This email contains the manuscript identification number. Within 48 h, an Editor-in-Chief looks at the manuscript and either assigns an Associate Editor to the manuscript or the manuscript is Withdrawn. A manuscript can be withdrawn because it does not follow APA guidelines or because it is not related to science teacher education. A letter is sent to the primary author informing them of the Associate Editor assigned to his/her manuscript or the issues that have caused the manuscript to be Withdrawn.

Approximately 15 % of submitted manuscripts are Withdrawn upon receipt because they do not comply with our submission guidelines or do not follow APA guidelines. Common problems include inappropriate citation and reference format, no abstract, no running head, no page numbers, tables/figures in wrong location, and single-spaced text instead of double spaced text. When manuscripts with problems are received, a letter is immediately sent back to the primary author stating that the manuscript has been withdrawn and must be revised to adhere to APA style before it can re-submitted. About 10 % of the manuscripts we receive are NOT specifically related to science teacher education and are sent back to the author without further review. Alternate journals for submission are often recommended. The frequency of submitted manuscripts not related to science teacher education has significantly decreased from last year, partially the result of the publication of our editorial on this topic in the February, 2014 issue of the journal.

Assigning Reviewers

Associate Editors and Editorial Review Board (ERB) members are vital to our journal. Their discriminating reviews help us meet our goal of publishing research-oriented articles and theoretical articles with implications for research to improve the quality of science teacher education. A list of current Associate Editors and ERB members is included on the inside of the front cover and the following journal page of each issue. Anyone wishing to become an ERB member should write the co-editors at the address listed on the inside front cover. A call for ERB members is also posted on the organization listserv each Fall and Spring.

The Co-Editors assign an Associate Editor to each manuscript and the Associate Editor assigns two ERB members to each manuscript, based upon its substantive focus. A “blind” review process is used. Every attempt is made to select Associate Editors and ERB members whose expertise and interests are most closely aligned with the focus of the manuscript. Within 3 days after being received by an Associate Editor, each manuscript is sent to ERB members. Reviewers are urged to complete their reviews within 1 month. At present, ERB members have been taking an average of 4 weeks to complete their reviews.

The Review Process

Keeping in mind the guidelines specified on the Reviewer Form, each ERB member completes a detailed review of the strengths and weaknesses of each manuscript. These strengths and weaknesses, along with a recommendation concerning publication, are communicated in writing to the Associate Editor. The Associate Editor reads the reviews and also reads the manuscript. The Associate Editor synthesizes the ERB comments and his/her own comments and makes a recommendation to the journal Co-Editors (Norman Lederman and Judith Lederman). As reviews are received by the editorial office, the managing editor enters the information into the database.

The Co-Editors consider the recommendation of the Associate Editor and render a decision. It is our policy to accept the decision of the Associate Editor, given their expertise and prominence in the field. Only under rare circumstances would we consider overturning overturn the decision of the Associate Editor and the ERB members. We have never overturned the decision of an Associate Editor during our term as Editors. The various decision options are: Accept, Minor Revisions, Major Revisions, Reject, but encourage to re-submit, or Reject.

The logic of the aforementioned process is quite simple. The Co-Editors make every effort to respect the opinions of our Associate Editors and ERB members. We fully accept the responsibility of making decisions when there is a clear difference of opinion, but we do not think it is valid to override clearly reasoned decisions by our expert Associate Editors. Using such a process, we can avoid problems sometimes noted with respect to other journals; that is, the journal becomes a reflection of the personal professional preferences and biases of the editor(s).

What do Authors Receive?

Immediately following an editorial decision, the author is notified in writing. At this time, the process from submission to author notification of editorial decision is approximately 3 months. The author receives anonymous copies of the Associate Editor's and ERB members' comments regardless of the manuscript's disposition.

For rejected manuscripts, authors are informed that they may revise and resubmit their manuscript to the full review process, if desired. This is true for both manuscripts receiving a Reject or a Rejected, but encourage to re-submit decision. For manuscripts that receive a decision of Major or Minor Revisions, the authors are notified that, contingent upon certain revisions, the manuscript will continue to be considered for publication. Typically, if revisions are made the manuscript is accepted. However, the co-editors maintain the right to deny publication if the suggested revisions are not made at a satisfactory level.

Authors are given 30 days in which to make revisions and return the manuscript. Before removing a manuscript under revision from our active files, the author is sent two warning notices. It is possible for extensions in the revision time to be granted, if there are extenuating circumstances.

What Happens After Revisions are Made?

Revised manuscripts are sent to the Associate Editor and the original ERB members who reviewed the manuscript. If it is decided that revisions have been made at a satisfactory level, the author is informed that the manuscript has been officially accepted for publication.

Once a manuscript is accepted, it goes through a copy editing process at Springer and page proofs are sent to the author for revision. The author is responsible for making requested copy edits and returning the revised manuscript to Springer within 30 days. If there are delays in this final editing process, it is likely the publication of the article will be delayed to a later issue than planned.

Once the manuscript has been satisfactorily revised the author is sent a final or galley proof. As we are approaching printing deadlines at this point, turnaround time is often tight for reviewing proofs. The author is requested to read the manuscript carefully for any errors or necessary changes. If no response is received from the author within the allotted deadline, we assume the manuscript requires no changes.

How Can You Improve the Quality of Your Manuscript?

The *Journal of Science Teacher Education* remains one of the most respected international journals in science teacher education because of its high standards. In this report, we present a number of outcomes and measures generated from the database of the Springer Editorial Manager system. These items of information about *JSTE* span the period since our June, 2014 editorial, May 1, 2014 to April 27, 2015.

In this time period, 240 new manuscripts were submitted to *JSTE*. Of the 250 new submissions, about 15 % of the manuscripts received are sent back because of APA

issues or they are not related to teacher education. Of the manuscripts that are given an Associate Editor Decision, 14 % received an Accept decision, 17 % received a Reject but Encourage re-submission decision, 29 % received a Reject decision. Our acceptance rate for this time period is 14 %. Authors will hear from the editors in an average of 1 day after submission. Currently it takes an average of 30 days for a decision to be reached on a manuscript.

Most manuscripts are rejected for publication because authors have inaccurately anticipated the focus of reviewers. This means that many, but not all, manuscripts could be made more acceptable for publication if the authors were more experienced with the review process. Table 1 presents the reasons and associated descriptive statistics reviewers have given for rejecting manuscripts during our tenure as co-editors. Please note that articles typically are rejected for numerous reasons. A manuscript rarely is rejected for a single reason (i.e., the infamous “fatal flaw”). Consequently, the percentages included in Table 1 total in excess of 100 %.

The manuscript weaknesses cited by our reviewers are quite similar to those encountered by reviewers for other journals in science and mathematics education. It should be noted that, although a manuscript is rejected because it is considered inappropriate for the journal, it may be perfectly acceptable for another professional journal. Remember, our journal and organization are dedicated to research and theory in science teacher education.

Even the briefest perusal of the items listed in Table 1 indicates a clear pattern, specifically related to research investigations. The categories of “Weak methodology description” and “Incomplete description of the study” clearly overlap, with the latter more inclusive than the former. Combined, these two categories are mentioned for a third of the rejected manuscripts. Conceivably, many authors could easily correct this problem by simply including a more detailed description of the research procedures and design. For investigations that have not considered important details, the advice here would be of little help. The category “Conclusions not supported by evidence” seems to be relevant to those studies in which important design details have not been considered.

Throughout our tenure as co-editors, the category of “Unclear purpose for the study,” has been among the most common reasons for rejection of a manuscript. Norman remembers, while delivering a plenary talk at a “research school,” hearing the following comment, “I have collected my data, I have analyzed my data, but I do not know what my question is.” We have not seen anything this extreme in any submitted manuscript. The

Table 1 Reasons *JSTE* manuscripts have been rejected during our editorship

Overall manuscript	Percent	Manuscript sections	Percent
Not appropriate for SSM journal	10	Unclear purpose for study	19
Too lengthy	7	Weak literature review	23
Weak organization	9	Weak methodology description	19
Use of poor grammar and spelling	5	Weak instrument description	9
Does not contribute new information to the field	29	Weak data analysis description	16
Unclear appendices, tables, and figures	5	Conclusion not supported by evidence	15
Weak connections to K-16 instruction	8	Incomplete description of the study	16

reasons “Does not contribute to the field,” and “Weak literature review” have also been commonly noted problems cited by reviewers. One of the often-cited problems with educational scholarship, research or otherwise, has been the lack of coherence across sub disciplines and/or the building upon prior knowledge. In particular, authors consistently “reinvent the wheel” because they have not carefully examined related literature in their own discipline or a closely related sub discipline. If our scholarship and research is to progress, we must build upon the findings of previous research, and we must attempt to become familiar with the literature in clearly related fields. If science teacher educators want to remain knowledgeable about teaching and learning, we must explore the literature in psychology journals, learning science journals, and generic teacher education journals, instead of remaining solely wedded to the journals dedicated to science education.

Country of Origin of Manuscripts Received

One of our primary goals as editors has been to increase the journal’s international presence. A stronger international presence will facilitate our efforts to achieve ISI indexing for the journal. Of the 240 new manuscripts submitted in this time period, 102 (43 %) are from authors at institutions outside of the U.S and represent 33 different countries. Last year only 19 countries were represented. These numbers represent the growing international presence of JSTE. The countries that submitted papers during the time period reported here are Australia, Brazil, Canada, Chili, China, Cyprus, Estonia, Ethiopia, Finland, Germany, Greece, India, Indonesia, Iran, Israel, Japan, Korea, Kuwait, Macao, Malaysia, Netherlands, New Zealand, Nigeria, Norway, Philippines, Portugal, South Africa, Spain Switzerland, Thailand, Turkey, UAE, and the UK. Below, Table 2 provides a breakdown of manuscripts submitted by country.

Table 2 Manuscript submissions by country

Country	Submissions	Country	Submissions
Australia	3	Kuwait	1
Brazil	1	Macao	1
Canada	12	Malaysia	2
Chili	3	Netherlands	10
China	6	New Zealand	1
Cyprus	2	Nigeria	2
Estonia	3	Norway	4
Ethiopia	1	Philippines	1
Finland	5	Portugal	1
Germany	2	South Africa	1
Greece	1	Spain	10
India	2	Switzerland	2
Indonesia	1	Thailand	1
Iran	3	Turkey	12
Israel	2	UAE	2
Japan	2	UK	1
Korea	1	USA	138

We want to take this moment to thank Hans Fischer of the University of Duisberg-Essen, Germany for his tireless work as Associate Editor during the past 2 years. Hans is trying to transition into a more relaxing life. We can not thank him enough. Consequently, we would like to welcome Knut Neumann as our new Associate Editor from IPN—Leibniz-Institut für die Pädagogik der Naturwissenschaften und Mathematik, Kiel, Germany. Finally, we wish to acknowledge the efforts of our Associate Editors, ERB members, and Managing Editor, Selina Bartels. Their efforts are hardly compensated in any material way, and it is all of their work that makes our job so enjoyable.

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