

# Editors & Referees: Friends or Foes?

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*It is important that researchers ensure that the findings of their research are made available as far as possible to the relevant publics. This includes the academic communities to which they belong implying publication in research journals. This process almost always involves addressing issues raised by referees and editors in response to a submitted paper. The authors will discuss the nature and implications of this interaction by drawing on their recent experience with a paper submitted and subsequently rewritten.*

## *Introduction*

Researchers have a duty to ensure effective reporting of their research to the international academic communities to which they belong. This is, at times, a testing process since reviewers, as well as seeking to improve the paper for the journal audience, bring their own particular interests to the process. This can take the paper in unexpected directions, threaten the paper's coherence, and can mean the size of the rewritten paper goes beyond acceptable limits as the authors attempt to address issues raised. The response to reviewers' comments is never dispassionate, and the process can be annoying or even sufficiently painful to discourage resubmission. Also, busy people have to decide whether the uncertain outcome is worth the expenditure of further effort, particularly if the review comments arrive a year after submission and perhaps a number of years after the project took place. We write this paper, reflecting our own experience with such a situation. A survey of articles on the peer review process will uncover a number that deal with the validity of the process, particularly in the medical and health sciences, but very few that deal with this from the author's perspective.

## *The Study Being Reported*

The study which led to the writing of the paper was designed to gather data on perceptions of professional development (PD) provision amongst teachers of mathematics and science in rural schools in Victoria. It was funded under the Science, ICT and Mathematics Education in Rural and Regional Australia (SIMERR) banner and was an extension of the professional development section of a survey across the country. The data were gathered by means of a relatively unstructured interview of staff members in seven schools in Victoria. All of the principals were interviewed and as many teachers as practical in each of the schools. The schools in the sample were chosen following interviews with staff members (RPO's) located in the regional offices of the Victorian Education Department with responsibility for providing in-service education in maths and science. These professionals gave their perceptions of PD provision for the teachers within their region and suggested

schools which they saw as catering well for staff in this area. In total 50 people were interviewed with the interviews taking about 1 hour each.

The report (Tytler et al, 2009) set out details of the various perceptions of the PD provision for these teachers and, importantly, proposed a framework based on the notion of discourse communities which it was argued assisted in interpreting the data and provided a useful way of thinking about the PD needs of these teachers. The authors decided that the study and particularly the framework could provide useful insights for the international community and so a paper was developed which in essence was a summary of the research report but with the theoretical framework emphasised.

### *Response to the Submitted Paper*

The editors of the journal wrote to the authors asking that the paper be resubmitted following a rewrite responding to the comments of the three reviewers, which were provided and also summarized by the editors. In this paper we begin with the comments by the reviewers related to the methodology of the study. These are set out in Table 1.

Table 1  
*Comments by reviewers on methodology*

|   |
|---|
| <p><b>Reviewer 1</b>Methodology<br/>The gathering data and analysing the data sections are clear and well-written.</p>  |
| <p><b>Reviewer 2</b>I recommend the inclusion of more contextual information such as</p> <ul style="list-style-type: none"> <li>- how many RPOs are there in rural and regional Victoria, Australia? This information if needed to understand what proportion of this group was interviewed.</li> <li>- How many schools were in the population? What is the general profile of schools of interest?</li> <li>- What proportion of schools were involved in the study?</li> <li>- Were principals given any criteria to consider when recommending teachers for interview? Did secondary teachers need to teach science and or maths? How were primary school teachers nominated/selected?</li> </ul> <p>The data analysis process is described carefully to explain that the intention is to scope out issues. Nevertheless, the findings would benefit from some quantification (the study is based on interviews with 50 people)</p> <p><i>Please could the coding system for the quotes be explained it would be useful to know if a quote is from a teacher, principal, RDO.</i></p> |
| <p><b>Reviewer 3</b>(1) Context of the study: Was there a particular reason (other than convenience) that led this study to be carried out in Victoria? For instance are there issues arising from previous studies in Victoria that this study builds on? How do rural contexts in Victoria compare with the rest of Australia?</p> <p>(2) Some brief explanation of the difference between "rural and regional" would be helpful. The SiMERR study cited in section 2.4 refers to rural only. Is there likely to be any differences between the PD needs of teachers in regional areas?</p> <p>(4) Data collection: The researchers state that their study was undertaken as a SiMERR initiative, however it is not clear when the data were collected for this study. Please clarify.</p>  |

The first point that needs to be made is that there is minimal commonality between the comments of the three reviewers. Whilst it would be pleasant to explain this fact by suggesting that Reviewer 1 must be much more intelligent than the others, it is more realistic to accept that the comments of Reviewers 2 & 3 are likely to be a good indicator of problems which readers of the journal would have unless appropriate changes were made to the article.

The second point is that, although the list of issues raised by Reviewers 2 and 3 appears extensive, most of them could be dealt with relatively easily.

A major issue that the reviewers had identified with respect to methodology was that we had failed to identify all of the information that non-Australian readers would require to make a judgment on the validity of the arguments mounted and the relevance to their own situation. In rewriting an article authors need to decide which comments should receive serious attention. We were helped in this case by the summary provided by the editors which gave their view of the importance of the issues raised by the reviewers. This is illustrated in Figure 1 where the editors are pointing to the necessity of addressing the procedural recommendations of Reviewer 3.

**Methodology, Study Design, Data Analysis**

Your reviewers raise concerns about the need to reorganize and clarify your methodology section. For example, .....Reviewer 3 offers a series a specific procedural recommendations. Attending to these issues will help you deepen and clarify your analysis.

*Figure 1: Comments on methodology by the editors*

### *Our Second Submission*

As a consequence of addressing the various issues raised by the reviewers and endorsed by the editors the rewritten paper was significantly longer than the original and we received the message shown in Figure 2 from the editors.

There are two issues here. The first is the request to reduce the size of the article. The enlarged size of the paper actually arose through attempting to meet the requests from the reviewers for more information. However, we found that we could reduce the size of the article by various means, whilst still addressing the earlier concerns of the reviewers, primarily by deleting all the data from several aspects of the original report, which were not central to the main argument of the paper. In fact, it was surprising to us how readily we could manage to reduce the length of the article without sacrificing meaning, when we really had to do this, and how this enforced discipline of excising material that was not central to the argument improved the flow and clarity.

The second issue is the suggestion that the rigor of qualitative data will be less questionable if details of the interviews are included with the quotations from the transcript. We complied with this request with mixed feelings.

We have read your revised manuscript entitled Discourse Communities: A framework from which to consider professional development for rural teachers of science and mathematics. We note several problems that must be addressed before we can send your work out for another review. First, your document runs to 11,393 words. We do not accept documents of this size. You need to bring your revisions down to 9000 words.

Second, we want you to enhance the citations you offer for your interview quotations. Qualitative research often comes under fire for lack of rigor and/or questionable representation of data, among other issues. Consequently, we are advocates of including citations for quotes drawn from the text of an interview or observation. That inclusion implicitly suggests to the reader that the researcher completed the interview and can locate quotations within the transcript if a question arises. While this may seem to be a small point, we believe it makes an impact on questions of rigor that can arise. We assume you have a code for those people you interviewed and so, that your citation that might look something like this: (IVAN11-2-09, p. 5). We think this simple form of citation strengthens the representation of qualitative research.

Based on our review, we have decided to suggest that you undertake a revision and resubmit your manuscript. We must have a manuscript whose word count fits our requirements.

#### OVERALL ASSESSMENT

We hope that you are able to make these revisions on your manuscript and submit it within a three month time period. When you resubmit your paper, please include a detailed cover letter indicating the ways you address with the reviewers' comments. Thank you for submitting your manuscript to TATE.

*Figure 2: Comment from editors related to the rewritten article*

*Figure 2: Comments from the editors concerning the rewritten paper*

## *Discussion*

There are a number of themes concerning the peer review process that arise from this experience, that also relate to our experience with other papers at other times.

The first theme relates to the quality and consistency of reviews. Clearly, the points of view of the reviewers differ and there is inconsistency in their judgments presumably relating to their particular theoretical and methodological perspectives (Hojat, Connella & Caelleigh, 2003). In this situation there is a need for writers to make judgments about how seriously to respond to the comments, and how to steer a path amongst them. In this case the overview of the editor was important in providing a basis for judging the seriousness with which to treat the various requests for change and clarification.

The second theme relates to the personal response of the writers to the critique that is central to this review process. In our own and others' experience of the review process, the response can vary from relief or even exultation when a paper is accepted with only minor changes, to annoyance at the apparent triviality or irrelevance or lack of insight and appreciation of the reviewer, to anger or desolation at the effrontery of the critique, or despair at the amount of work still to be done to get the paper to a publishable form.

The third theme concerns the outcome of the review process. Does it lead to defensible selection and improvement of research papers and the research culture? Clearly with the range of comments on any one aspect of the paper, it would be hard to argue that the process is objective, at least in a narrow sense. To that extent, whether a paper is accepted or not is a matter of chance – how many friendly reviewers did we happen to get from the three chosen? Here, the insight and clarity of the editors’ comments, and their choice of reviewers, is important. Perhaps one might say that this blind peer review system is the best of an imperfect set of options.

As to whether the process leads to improvement in the papers as a result of the review process, we would have to say that in our experience this has been true in almost all cases. While at times the review comments are annoying, possibly based on a misreading of intention or the promotion of a different perspective, or seem to ask for a different paper than the one you wrote, responding to these disparate comments is usually a clarifying process in which one is led to see how what was written can be misinterpreted, how certain perspectives were not taken into account, or how counter arguments need to be acknowledged and refuted. The process can be painful in the way moving away from first thoughts to a more considered position can be. Our position is supported by data, which we set out in Table 2, provided by the editor of a major journal. Clearly an appropriate inference from the data is that for researchers who persist in responding to requests for major revision, the quality of the paper is improved as a result of the review process and in most cases is eventually published.

Table 2

*Data showing the outcomes of consideration by reviewers and editors in a major journal (different to the journal we were dealing with): 2009 figures used with consent.*

| <b>Decision</b>      | <b>Original submission</b> | <b>Revision 1</b> | <b>Revision 2</b> |
|----------------------|----------------------------|-------------------|-------------------|
| Accept               | 0.6%                       | 19.6%             | 64%               |
| Major revisions      | 26.6%                      | 34.8%             | 4%                |
| Minor revisions      | 4.7%                       | 26.1%             | 24%               |
| Reject               | 63.3%                      | 17.4%             | 8%                |
| Revise before review | 4.7%                       | 2.2%              | -                 |

In many ways, and in the best cases, we see the review process as a professional conversation in which our perspectives and arguments are put to the test and where others contribute by raising issues, making suggestions or pointing to the need for clarification. As reviewers we have also been in the position of balancing between sitting in judgment, participating in a professional dialogue, or mentoring. The more one comes to the review process with a view of its supportive and helpful nature, the better the outcome will be.

## *References*

- Hojat, M., Gonnella, J., & Caelleigh, A. (2003). Impartial judgment by the “Gatekeepers” of Science: Fallibility and accountability in the peer review process. *Advances in Health Sciences Education*, 8, 75-96.
- Tytler, R., Malcolm, C., Kirkwood, V., Symington, D., & Darby, L. (2009). Professional development of rural and regional teachers of science and mathematics. Geelong: Deakin University. Waurn Ponds, Geelong: Deakin University.