Reviewer's report

Title: A randomized evaluation of the quality of scientific writing using Web-based versus traditional workshops

Version: 1 Date: 19 August 2008

Reviewer: James Wofford

Reviewer's report:

GENERAL - All components of the manuscript could be improved. The subject and methodology are both of interest. The writing quality seems uneven with typographical and grammatical errors, and the language could be improved. While the authors have gone to great lengths to have an organized methods and results section (especially since this is a study of scientific communication), the abstract and discussion could be better organized and the conclusions could be better stated.

Major Compulsory Revisions

ABSTRACT

Purpose - The lead sentence “Scientific writing being the primary means of communicating the research findings, effective delivery of these findings is of critical importance” could be better stated “Scientific writing is the primary means of communicating the research findings, and effective delivery of these findings is of critical importance.” Is it the RCT that is doing the comparing, or is it the authors?

Methods - The outcomes are not clearly stated in understandable language. The domains of the SSQS scales could be mentioned in parentheses here. It is better to avoid abbreviations (SSQS, ICC, SSQSavg) in the abstract as well as the name of statistical software.

Results --Without some idea of the outcomes involved, readers will not know what is meant by an error. Connecting the concept of manuscript quality with the error rate may be difficult for the reader of the abstract. The main results of the trial should be stated before the comment on interobserver reliability.

Conclusion – The abstract conclusion and concluding paragraph of the discussion are different enough that it makes this reader/reviewer uncomfortable that the conclusions are not well supported by the study. If teaching scientific writing is different enough from other educational fields, then the conclusion should reflect that.

INTRODUCTION

-- The second sentence of the first paragraph should communicate that poor writing skills can jeopardize knowledge transfer to readers in addition to the other issues jeopardized.
The difference between distance and the web-based education is not completely clear to this reviewer. As defined by the author, distance education makes use of the Web. However, correspondence courses, whether by e-mail or regular mail, might illustrate the difference between the two clearer. In any case, the terminology is faulty, and reflects the evolution of terminology rather than the author’s ability to explain it.

There are many more studies comparing web-based learning and conventional classroom instruction, some of which focus on other outcomes beyond student performance and many of which apply to domains other than graduate level courses in learning disabilities. The sentence should be reworded to acknowledge the existence of these studies. Reviews of the subject would most easily reflect this experience (see below). It should be acknowledged that web-based learning is a foregone conclusion despite the dearth of evidence supporting it, and judging its ubiquity, whether or not there are unintended consequences.

An equally strong reason to do this study is to challenge the value of Google docs as a vehicle for web-based learning. While it may be true that no previous study has addressed the teaching of scientific writing with a web-based versus traditional comparison, as the authors have stated, how many more domains of education do we need to in order to before claim that web-based instruction has value, regardless of the learning domain.

What are the drawbacks suggested or documented from previous studies?

METHODS

The setting could be better described. This reviewer cannot tell from which institution the students were drawn. Likewise, which institutional review board approved the study? How long was the workshop?

Perhaps the SSQS is a well accepted scale, but for readers who are not familiar with this scale, does it related to manuscript quality communication Vance or satisfaction. Is this scale available online or as an appendix to this manuscript? Is it validated? This reviewer would have preferred putting the details of the SSQS in the outcomes section. The two sections “Outcomes” and “Assessment strategies” are potentially confusing.

It is not stated how satisfaction was measured. Is previous experience a reference to experience with web-based learning or experience with scientific writing?

What is a timeline oriented research topic? It is implied that participants did not write a full manuscript, but had the option of writing either the introduction or discussion. How long did students have to write their discussion or introduction?

This reviewer is not clear on what a communication event is. For researchers considering using this outcome, a better description is needed of how it is measured. Was it e-mail, instant messaging, Google doc editing, etc.?

The fact that that the traditional workshop group members or afforded the use of instant messaging and telephone is interesting. Does this represent distance
or e-learning as well? Does it make the comparison group less than conventional?

-- Who led the workshops? The writing guidance workshops is described variably as face-to-face, traditional, in-person, classroom. Consistency would help the reader.

-- What software was recommended for voice over Internet protocol? Was it audio and video? Are their previous studies of Google Docs? Are there examples of the templates that could be shared, perhaps as an appendix?

-- Did the authors consider a multivariate analysis?

-- Figure 1 introduces new terms that are not explained elsewhere (encounters, synchronous and asynchronous sessions).

RESULTS

-- Were there dropouts after randomization? Why were there time constraints? Did it take longer to do the online course?

-- Several times the author claims that there was no difference between the course of study between the two groups, and yet stratification should have ensured that there was no difference.

-- Where are the findings on fitness for submission relevance to the field, depth of the investigation, and ethical appropriateness that were mentioned in the methods section?

-- Table 2 is not worth the space or reader’s attention. Just include in the text.

-- Without knowing how satisfaction or communication events was measured, and without any context about what these scores mean, the differences may be statistically significant, but this reviewer has no means of saying whether the effect size is sizable, and clinical meaningful

DISCUSSION

-- In general, the discussion should be better organized. The first line of the discussion should focus on the main results, not on the analysis of the inter-observer reliability. The first paragraph repeats what was just said in the results section. There are multiple one or two sentence paragraphs, which makes for choppy reading. The concluding paragraph is confusing and not conclusive to this reviewer.

-- In the paragraph on studies that found no differences between the two web-based and traditional, the “exciting new web-based writing environment” mentioned in the Mehlenbacher-Miller study may raise too many new questions. Should the reader know more about this particular software/strategy? This reviewer assumes that this study showed no differences between web-based strategies and traditional strategies, but the sentence focuses, rather, on intriguing relationships and exciting environments. It is confusing how problems of communication in the Tinnerman study may have led to inconclusive results.

-- I am not accustomed to seeing the full name of multiple authors when a reference is cited.
The two sentence paragraph on previous experience among users cites a study by Smeaton and Kjell. This brings to light the question of whether previous experience is a reference to previous experience with web-based learning or previous experience with scientific writing. Which is it in the current study?

The paragraph on mentor-student communication begins with a sentence about the results, then moves quickly to student’s feelings, then again to the benefits of web-based instruction, and then back to student and critiques of the course.

There are many other potential limitations of this study than those mentioned. Why was it not possible for the evaluators to be blinded at the initial stage? Were the evaluators also the mentors? If so, it should be stated.

As a point of discussion, the authors might consider discussing the advantages of Google docs versus other software (i.e., Blackboard).

The references are mostly before 2002, a little remote for this rapidly moving field. As the literature supporting the use of e-learning might be scattered and hard to find, the authors might consider other sources of references on this subject such as white papers from Adobe, Blackboard, etc., companies whose trade is e-learning. Some journal references are italicized, and some are not.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests