Reviewer’s report

Title: Designing integrated research integrity training: authorship, publication, and peer review

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Reviewer: Michael Kalichman

Reviewer’s report:

This manuscript nicely summarizes efforts of the authors to thoughtfully construct a useful program in responsible conduct of research, with a particular focus on authorship, publication, and peer review. It is clear that the team has given a good deal of thought to general literature on effective andragogy as well as studies on the effectiveness of education in the responsible conduct of research. If for no other reason, the manuscript can serve as a valuable starting point for any individuals planning to develop a new program for training in research integrity.

The authors might consider the following to possibly strengthen the paper:

1. The goal of integrating ethics/integrity education is worth pursuing, as noted in the Introduction. However, true integration presumably means much more than "standalone" integrated courses. Integration would arguably mean that these issues are raised repeatedly not just in the required curriculum, but within the research environment. This point might warrant a bit of discussion?

2. As written, it is hard to be clear on what was actually done. It sounds like each of the courses is only 2-1/2 hours in duration, but the authors describe what sounds like multiple activities/events (lightning talks, video clips) to cover both integrity issues ("responsible" practices) as well as skills and information. This is a lot of ground to cover and it seems little time would be left for actual audience participation. How many people were in the room for each session? What activities, if any, were used to actively engage the audience in discussion? How much time was available for such activities? To what extent is there live, faculty involvement in providing feedback to student questions and perspectives? And how many faculty were present for an entire session? for at least part of the session?

3. The classes appear to be very fast paced. This can be highly engaging for most people, but I am wondering the extent to which you have international students, many of whom might be less fluent in English? If that's the case, to what extent do you know how well received this format was for people in that group?

4. The question of voluntary vs. compulsory is an important distinction, as the authors note. However, given that the current courses are voluntary, it is remarkable that 509 participants chose to participate in the first course and 54 have already participated in the recently launched second course. This raises multiple questions about how and why so many people chose to attend (and what percent of the student population does this represent?). For example, are the students
using this course to fulfill some other requirement? Are there other courses available either for the skills or integrity topics, or are these the first ones implemented on your campus?

5. Assessing effectiveness and outcomes for such courses is a common challenge in this field. The authors are to be congratulated for recognizing the importance of assessing outcomes, but it is important to be clear on what has and has not been measured. The outcome measures here are really only "satisfaction" measures. The questions asked of participants do not really tell us whether the course was effective other than to have succeeded in convincing the students of the importance of the topic. Finding measures that will demonstrate useful impact on individuals following a single course, or more importantly on the institution after multiple courses, is a much more difficult challenge. [On that note, it might be worth considering using a 5-point scale in the future. With a 4-point scale, as long as someone felt that the course was not bad, average scores will unavoidably be between 3 and 4. A 5-point scale would allow a bit more nuance to discriminate degree of success.]

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