Reviewer’s report

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

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Reviewer: Michael Mumford

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We need more research examining the models that can be employed in ethics education. And, more critically, we need research examining the effectiveness of those instructional approaches. As a result, there is real value in the goals of the present effort. With this said, I had a number of reservations with respect to the present manuscript.

No Pre-Test: All evaluation data provided is based on only post-test data. To provide any meaningful evaluation data, however, a pre-test must be administered and changes in pre-post scores must be assessed. Unfortunately, no pre-post change data is provided. As a result, the data appraising course effectiveness is inappropriate and suspect.

N Size: Only 32% of those taking the courses provided post-test data. As a result, it is likely only those favorably disposed to the course provided post-test data. Thus, the post-test evaluation data is biased. And, it is biased in a direction that virtually guarantees a positive appraisal of the courses. This is a real problem.

Survey: Course evaluation is conducted only through student reactions surveys. One problem here is no evidence is provided of either the reliability or the validity of the survey measure employed. Moreover, no information is provided as to how these survey questions were developed. As a result, from a technical perspective, the survey measure used to gather post-test data is suspect.

Full Data Not Provided: In most journals, and hopefully all ethics journals, data is not to be presented selectively. Instead, full data is to be provided to permit replication or further analysis. However, means and standard deviations are not provided for all survey questions. Moreover, the text only presents data for select questions.

Qualitative Analysis: It is useful to supplement survey data with qualitative comments. However, when one does this one must describe the specific methods used to analyze the qualitative data. Who were the judges reviewing this data? Were judges aware of study hypotheses - note, it is not a good idea to use trainers as they have an apparent conflict of interest. Did judges agree about the qualitative material to be presented? These and other issues must be expressly addressed in describing method. Unfortunately, no such information is provided.

Cherry Picking: Lacking a clear, well-defined method for dealing with the qualitative data, a new problem comes to fore. Specifically, the author(s) may well be cherry picking the qualitative comments provided to justify the success of their course. Although the author(s) might believe
presenting both positive and negative comments help address this issue, it does not. The reason is both positive and negative comments might be cherry picked.

Instructional Model: Many models exist to guide instruction. The author(s) spend much time describing instructional techniques. However, at no point in the manuscript is an explicit, detailed description of the specific instructional model being employed provided. As a result, it is difficult for others to replicate the instructional programs being described at their instructions.

No Skills: The author(s) make much of covering both "how and why" in their instruction. They argue their instruction is unique because it seeks to develop skills. To begin, I should note much current work on ethics education focuses on ethical reasoning skills. Thus, the author(s) comment that skills have been neglected is simply not true. More centrally, it appears what is being trained are not skills but rather behavioral content. Please note, this implies the introduction to the manuscript must be reformulated.

Techniques: The author(s) recommend both faculty instruction and a multi-media instruction. Multi-media instruction has been studies for many years. The long and short of the obtained findings is it sometimes works and sometimes does not. However, no explicit, substantive justification is provided as to why it might work here. Similarly, faculty sometimes help and sometimes hurt ethics instruction. Again, what is the substantive justification for using faculty?

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