

GEO REU Workshop 2016

Working group: Publishing on your REU

9:30-10:30 am - Friday, Sept. 23, 2016

Leaders: Susan Sullivan.

This is from a small working group of workshop participants who discussed the topic and made notes on their discussion.

Goals

- Group wanted to know the NSF expectation for publishing, how many REU site PI are publishing and HOW and WHERE to publish and strategies for success in publishing.

Challenges

- Small amount of data.
- Not a lot of funding for evaluation.
- Ground in a literature that is not your own.
- No control group. Is this a false dichotomy?
- Needing an IRB. (Best to have your data collection tools approved by your IRB *before* collecting any data. NSF is now requiring this. As you consider publishing, check with your University's IRB to learn their stance on the type of data that you have and wish to publish; *might* not need approval if non-identifiable data - can be difficult if you can't avoid - e.g. the one african american @ univeristy x)
- You want to share your great thing -- this is neither useful nor interesting to others unless it is actionable for them.

Solutions and strategies

- JGE takes stance that publishing itself is an educational process. Most submissions require at least one revision before acceptance. An author new to publishing in education may receive more rounds of acceptance as editors and reviewers help the author develop a scholarly paper. JGE is teaching a community, and that's why editors are willing to go through resubmissions.
- Enter into agreements with one another (other PI) to create control groups.
- Situate your 'claim' within a Theory of Change or some other conceptual framework. It puts your success into a context. Examples: Social Capital literature; Self-efficacy literature; Retention literature in the workforce; need to know enough to know why you got the outcome you did.
- Need demographics — these situate your group with other groups; your reader can better understand where your data came from
- Need data
- Need to situate your group within other groups. Need to draw from literature.
- Other places to publish:
- Journal of Research in Science Teaching -- top journal for education research (there are many other education journals to consider as well)
- Journals disciplinary in focus.
- BAMS (Bulletin of the American Meteorological Society)
- EOS
- CUR
- Alt model? Find a graduate researcher who is working in this area and offer your site as a research site.

- Develop a partnership with a psychology dept or education dept.

Resources

- Susan is one of the associate editors of the J of Geoscience Education (JGE). Director of E&O at CIRES. Current editor is Kristien St John (sp?) has written articles on publishing in JGE. See one “unpacking the research paper requirements vs unpacking the curriculum and instruction requirements. See references.
 - Many of the papers are here.
- Bull of American Meteorological Society.
- NAGT - org that publishes JGE. Division that is geoscience education research. Building professional who can publish but who are “hybrid” between disciplinary research and education research
- Could start with AGI workforce data. Call Carolyn Wilson.

Additional thoughts/materials

- A research paper vs curriculum and instruction paper.
 - Research is about pushing the bounds of theoretical knowledge. Curr and instruction is about “what claim can I make about my idea?” that is directed more at practitioners. The bar is not as high as, for example, having a control group. Pre and post assessment can fill this role. These are two tracks within JGE.
- There is also an article about how to write a literature review paper.
- How many people ARE publishing on your REU?
- What is NSF PO expectation? - comes back to \$\$\$. Too little.
- What data does NSF want to know?
- “Mixed methods” - using qualitative and quantitative methods. You can use quotes. But you need it collected consistently. Need to code the responses. Susan likes mixed methods because the qual gives the quant context and explanation. But qual alone is not helpful. There IS a basis for qualitative research. Pattern identification.
- Look for multiple lines of evidence to support claims.

Ideas for potential collaborations

- Enter into agreements with one another (other PI) to create control groups.
- Develop a partnership with a psychology dept or education dept.
- <http://nagt-ige.org/>

Kristen St. John (2016) IRB Protocol Starting Point for Those New to Geoscience Education Scholarship and Publication. *Journal of Geoscience Education*: May 2016, Vol. 64, No. 2, pp. 99-100.

doi: <http://dx.doi.org/10.5408/1089-9995-64.2.99>

Kristen St. John, Heather Petcovic, Alison Stokes, Leilani Arthurs, Caitlin Callahan, Anthony Feig, Alexander Gates, Kyle Gray, Karen Kortz, Karen McNeal, Elizabeth Nagy-Shadman, Rebecca Teed, and John Van Hoesen (2016) Un-packaging Manuscript Preparation and Review Guidelines for Curriculum and Instruction and Research Papers. *Journal of Geoscience Education*: February 2016, Vol. 64, No. 1, pp. 1-4.

doi: <http://dx.doi.org/10.5408/1089-9995-64.1.1>

(2015) Guidelines for Preparing and Reviewing *Literature Review Manuscripts*. *Journal of Geoscience Education*: November 2015, Vol. 63, No. 4, pp. 270-270.

doi: <http://dx.doi.org/10.5408/1089-9995-63.4.270>

Laura A. Lukes, Nicole D. LaDue, Kim A. Cheek, Katherine Ryker, and Kristen St. John (2015)
Creating a Community of Practice Around Geoscience Education Research: NAGT-GER.
Journal of Geoscience Education: February 2015, Vol. 63, No. 1, pp. 1-6.

doi: <http://dx.doi.org/10.5408/1089-9995-63.1.1>