October 21, 2024 Education Working Group Call

Attendees: Mary Lofton, Jody Peters, Antoinette Abeyta, Rachel Torres, Saeed Shafiei Sabet

Agenda/Notes:

1. Congratulations to Mary! Her paper on **A modular curriculum to teach undergraduates ecological forecasting improves student and instructor confidence in their data science skills** is now out! https://doi.org/10.1093/biosci/biae089
   a. 2 ways to get open access
      i. Ask on Research Gate
      ii. Mary has submitted to VT's repository for scholarly works - it is under review, but once it goes through it the author's accepted version will be available open access
      iii. Pre-print https://essopenarchive.org/users/540012/articles/741831-a-modular-curriculum-to-teach-undergraduates-ecological-forecasting-improves-student-and-instructor-confidence-in-their-data-science-skills
      iv. Why Bioscience? Mary made connections through the BEDE network
      v. BEDE had a paper in Bioscience informational for instructor feedback
         ● BEDE looks like a really great group.
         ● They have a Slack group.
         ● Mary thinks if she was in a teaching position it would be really useful
         ● BEDE - Biological and Environmental Data Education

2. May 2025 Conference - the group should consider if there is anything we want to put together for a presentation or if there is something specific we want to do on Thursday which will be a time for working group to work together or for workshops.
   a. What is the thing that is worth working on that can be thought about before, during, and after to allow people who aren't able to travel to the conference to participate

3. Is there anything from what Dan Keefe shared about coding free data visualization on the September call that resonated with you?
   a. Reminder of resources shared
      i. https://processing.org/
      ii. https://puredata.info/
      iii. https://scratch.mit.edu/
      iv. Jody appreciated the visual coding options
         ● This would be really transformative for forecasting to make it more accessible

       v.   If you want chatGPT/AI to do code - you have to give very specific directions if you want it to come out correctly

      vi.

4. Any follow up recommendations people found for peer review, publishing, and open source licensing for educational materials?
   a. [Peer Review Journals for Educational Resources](#) - list of journals/platforms from August call
   b. Mary shared her recent experience about submitting a forecasting educational module to JOSE
      i. One of the first checks is an editorial bot checker. Then you get GitHub instructions on what the bot found and then at that point you can suggest reviewers - but not sure if you can only submit suggestions for people already on the list
      ii. There are instructions on how to organize the repo which is pretty clear.
      iii. One thing Mary found was that bot showed an error because it didn't find an open source license in the repo. The paper without the license was in a branch that was separate from the code which did have the license listed. In the future Mary suggests putting the license on all the branches.

5. Update from Rachel about forecasting, data science, R education workshop opportunity with EFISA that came out of the DEI working group (this will be a repeat for any who were on the Oct DEI call)
   a. Have they considered submitting something to the May Conference
      i. Yes would like to have meeting before and the motivate people to come together
   b. Outreach to EFISA and recruit new grad students
   c. Current active members sharing their research with flashtalks
   d. Learning - how to do forecasting challenge, for people who haven't coded - how to use R/python
   e. Give Cal Poly Humboldt students opportunity to learn about research
   f. Diana Dalbotten can be a good connection if the group wants to reach out to a broader group of undergrads

6. Look at the list of activities and priorities developed during Sept-Dec 2023. Does anything stand out? Should other things be added for priorities for Sept-Dec 2024?
   a. Test out Padlet with the current list of activities and adding additional activities
   b. Google sheet version with previous ranking and comments
   c. Padlet - Rachel used it for teaching - a place for students to add discussion in a collaborative
   d. Coding is such an important topic - for example with Mary - with all projects with code that she has been on there has been mistakes found so it is highly like that there is
      i. Jody will put this into a blog post format for next semester

      ii.   Mary added a link to Quinn's instructions on how to make your repo available for when others review your code
- It is sort of a docker tutorial
- The learning curve to figure out docker has actually saved Mary time for dealing with R and package versioning when running others people code
- Future goal for VT: Student develops code in a docker with known workflow that another person then checks with the same docker

e. When someone joins the group - having the padlet to show people what we have discussed
      i.   Good to add other activities the group has done - blog posts, etc
      ii.   Add instructions for the scoring

f. Story map - how to?
      i.   Could we connect with Diana to get a how to guide?
- Are there resources she can share
      ii.   Rachel might have student example to share.
- Hold Rachel accountable - have her share about
- Place based learning is useful, but when learning to code and site at computer all day it is hard and place based

g. Saeed: Does EFI have R packages that the broader community can use to help with forecasting tasks? Is there data base for EFI code that can be used for teaching?
      i.   We have the EFI GitHub project (https://github.com/eco4cast) with lots of repositories - but have never created a directory about what is actually in the repository.
      ii.   Mary will look up how/if it is possible to provide a Readme to a project to provide guidance about the repositories in the project