February 1, 2021 Education Working Group Call

Attendees: Anna Sjodin, Alyssa Willson, Jason McLachlan, Tadhg Moore, Diana Dalbotten, Lisa Haber
Regrets: Shannon LaDeau, Olivia Tabares Mendoza

Agenda/Notes:

1. Forecasting, Prediction, Projection Manuscript Update (Anna and Gretchen)
    a. Looking at definitions of forecasting worlds. Forecast, prediction, projection.
    b. Making progress!
    c. Edited Intro, Methods, and Results. Update figures.
    d. Big thing need help with is to look at the draft and send Anna edits on the Figures
        i. Figure 1 is not updated (nested bar charts) - still working on this
        ii. Send feedback to Anna about Figure 2 - size of dots is how central the terms are to the network
    e. Today input from the group. Wedding cake figure - the steps of forecasting. To move up you have to have the previous step figured out.
        i. Has input on left and output on right
        ii. Want 4 examples of forecasts
            ● Extra twist about figures from Jason's discussion with Sue Silver at Frontiers. They really like to have pictures. But don't like to have mixture of figures and graphics
            ● Could use the STC figure for the wedding cake topper
            ● Concepts and Questions type article for Frontiers. So they are strict about figure limits.
        iii. There is a graphical representation of this image where the y-axis is how far along you are to getting to the goal of decision support. The x-axis is the timeline of inputs vs outputs. But the graph image isn't as clear as the input/output with picture examples. So we focused on that for our discussion.
    f. Abby Lewis has been leading the creation of a Vocab box for defining additional words that uses input from the Theory Working Group.

2. Olivia's R infographic for teaching biostatistics with R Updates
    a. Olivia wasn't able to make today's call. She will send her infographic or we can look at it on the next call

3. RCN Education Workshop Update (Jason, Alyssa)
    a. June 7 - 1-day inclusive pedagogy workshop
        i. Goal - have conversation with people with experience with this to train ourselves and so we can bring these resources to the 2-day meeting
    b. June 28-29 - 2-day meeting on education will include participants from the RCN and others outside the RCN.

   i. Goal isn't to produce educational resources, but to start people and motivate people to work on their projects and get an idea of what people are working on.

   ii. Want to seed the project with a bunch of ideas for education materials that can continue to work together

   iii. Or have groups that come up with good ideas that could be worked on moving forward

 c. Collaboration with Nievita Bueno Watts and students at Humboldt State. Will be meeting with them in a half hour.

   i. Nievita has funding for undergrads. Want to see if students can look at the resources Alyssa has compiled to test out the resources to determine what works well and what is still hard to understand.

   ii. Big challenge is how to make the resources more organized. Currently they are set up by tasks. Rather than a continuous process from no forecasting experience to understanding forecasting.

   iii. Develop a rubric with the students to evaluate the resources.

 d. Educational resources - put a link to a view only Google doc online. There are getting to be so many resources now that it makes sense to go this route rather than

   i. Would be good to organize by intro/advanced level (do this instead of undergrad/grad)

4. Document for Guidance Counselors and Instructors working with students interested in ecological forecasting
 a. Here is the draft
 b. Lisa still has on her list to look at the What is Ecological Forecasting section.
 c. Want to emphasize the disciplinary interest
 d. Add to courses - an interdisciplinary seminar. Alyssa's undergrad offered courses on philosophy and ecology. Being able to apply concepts across disciplines.
 e. Social Science courses
 f. What steps do we need to take to share this document with EFI
   i. Lisa will look over it over the past month to see if she can get it to a page.
   ii. Run by people within EFI
   iii. Run by guidance counselors
   iv. See if it can be usable for community colleges
 g. Current course instructions are math heavy, which is important for biology students who want to create forecasts. But may not be as appropriate for people using forecasts. Be involved with the development of forecasts.
 h. 2 versions - one for students who have heard of eco forecasting and how to build out the toolkit they need. Another version for people who haven't heard of eco forecasting. If you have students who have quantitative ability and interest on working on ecological forecasting
 i. Or frame it as "have you considered ecological forecasting as a solution to applied problems"

j. Take a step back to reach a broader audience and then include a way to contact EFI. If you want to learn more or if you know what forecasting is. Here are some resources to get there.
k. National Science Teachers Association (high school level) or NACE (career counselors). This would inform the science teachers and guidance counselors.
l. Could think about this for later - we haven't tried to reach out to high school science teachers.
m. For our DEI panels - high school science teachers.
   i. Michigan State has developed some data-driven lesson plans for high school instructors. It may be worth reaching out to them (not sure exactly who is in charge)
n. Providing an example of what you can do with a biology degree. You don't just need to be a doctor. Ecological forecasting is

5. Next meeting
   a. Check in to get feeling about if what kinds of tasks we want to focus on. Are the things we are doing now, the things we want to focus on or are there other things?