

2019 9.21 NC-FEW meeting

NC1207 (NC-FEW) meeting

September 21, 2019

Phoenix, AZ

Sheraton Phoenix Downtown, Ahwatukee B, 340 N 3rd St, Phoenix, AZ 85004

Attendees

Hannah Scherer

Nicole Sintov

Hui-Hui Wang

Cory Forbes

Doug Lombardi

Archie Clutter

Todd Campbell

Eliza Reilly

Sarah Fick

Chelsea Romulo

Greg Goins

Lynn Bryan

Craig Allen

Mari Mwale

1. Introductions (30 min)
2. NC-FEW/RCN overview and timeline (30 min)
 - Website: <http://ncfew.org/>
 - Social media
 - i. Hashtag: #NCFEW
 - ii. Twitter group? Can we do this?
 1. Chelsie suggested some tools for scheduling tweets that can post simultaneously to multiple SM platforms
 - a. Hootsuite <https://hootsuite.com/>
 - b. Buffer <https://buffer.com/>
 - c. Chelsie is happy to help get this set up
 2. Maybe someone's role can be SM maven?
3. Topics for discussion
 - Recruitment and membership model (30 min)

- i. Networks of networks - how does NC-FEW connect to all the different communities? How do we create structure for this network?
- ii. Identify other organizations to connect to through current participants as boundary crossers:
[Add to Google Sheet](#)
- iii. dissemination/spreading the word (e.g., target conferences) - SERC community/InTeGrAtE
- iv. What do participants 'get'? What do participants do? How do we sell NC-FEW?
 1. Opportunities to disseminate their work
 - a. Publishing members work publically - helping visibility/dissemination
 - i. Highlighting work in the newsletter
 - b. E.g., submit a vetted product that can be shared out w/community and/or the public
 - c. Example essays from Earth Education for Sustainable Societies conference:
https://serc.carleton.edu/integrate/workshops/sust_societies/essays.html
 - i. Prompt:
https://serc.carleton.edu/integrate/workshops/sust_societies/submit_essay.html
 2. Opportunities to network and collaborate, starts with a PROBLEM that will create an environment to invite people in
 3. Mentorship
 4. Some kind of membership designation (may be different value systems based on institutions people are affiliated with)
 5. Discussions about Problems of Practice?? - Development of "Best Practices"?
 6. Travel funding (to NC-FEW mtgs)
- o Organizational structure/meeting schedules (30 min)
 - v. What are peoples' roles?
- o Working group activities (60 min)
 - vi. Infrastructuring - what do these groups need? What structures are particular to the contexts?
 - vii. What is the most effective/productive working group infrastructure?
 - viii. Transferable models for application of what we've learned
 - ix. Sync the timing of the work and the different timescales of the work
 1. Initial resources leading to lit reviews (syntheses) leading to proposals (e.g.)
 - x. Who are the practitioner communities relevant to each working group
- o Webinars and newsletters (30 min)
 - xi. Possibly assign newsletter manager role to one of our members?
- o Nexus teaching tools
 - xii. Broad level themes associated with community work
- xiii. Research briefs - e.g. Research + Practice Collaboratory
- o Challenge: focus on research vs. educational applications
- o For working groups, who are "practitioners" and how do they engage with our work? How do we envision them being involved in the RCN?
- o Research on Team Science (for use in the Network and for use as an education tool)

- xiv. There is existing literature, such as [Stokols, D., Hall, K. L., Taylor, B. K., & Moser, R. P. \(2008\). The science of team science: overview of the field and introduction to the supplement. American journal of preventive medicine, 35\(2\), S77-S89.](#)
- xv. Chelsie has one paper on this: [Wallen, K. E., Filbee-Dexter, K., Pittman, J. B., Posner, S. M., Alexander, S. M., Romulo, C. L., ... & Garcia, M. \(2019\). Integrating team science into interdisciplinary graduate education: an exploration of the SESYNC Graduate Pursuit. Journal of Environmental Studies and Sciences, 9\(2\), 218-233.](#)
- o Themes from before - could be used as an organizing framework for Teaching Tools and providing resources for researching these things in context
 - xvi. Tie back to [10 NSF big ideas](#)
 - xvii. What is the lever within each WG that allows us to center FEW within these theme areas that feeds back in to facilitating research
 1. Action item: Each WG revisit the core themes and elaborate further for the context to help identify the focus moving forward
 - a. Iterate between WG and Leadership teams
 - b. Working group agenda to keep us on task
 2. One way of thinking about the themes is means, and outcomes (and products).
 - xviii. Research brief on these themes (e.g. how to research ST within FEW)
 - xix. Bring hidden dimensions of the system to the forefront... bring the FEW nexus to those underserved communities (non land-owners) who may not recognize or be aware of unsustainable pathways and dynamics
 - xx. Does NC-FEW RCN concentrate on building a cart or providing cargo to load in the cart, or do both simultaneously

Table 1: Core NC-FEW Themes

Systems thinking
 Argumentation/evidence-based reasoning
 Citizen science
 Contextualized and localized issues
 Equity and environmental justice
 Informed decision-making
 STEM/FANH science literacy
 Civic engagement
 Interdisciplinary training

Some of these are outcomes, some are means - perhaps more consistency here - strategies vs. goals/objectives

- Computational thinking

- Data literacy
- Modeling
- I heard Stability and Change in there... :)

From Doug: K-12 example (tentative) question/statement centered around theme integration related to a problem of practice: “How do teachers facilitate their students’ engagement in systems thinking and argumentation and evidence-based reasoning to equitably address food-energy-water issues to solve local, regional, and global problems?”

- Proposal development
 - i. NSF INCLUDES, providing low-cost opportunities to learners - Gregory
 - ii. [NSF IUUSE - EHR](#)
 - 1. Chelsie developing a proposal (submission Dec 4) to create a tool for assessing learning for systems concepts. Working Title: "Collaborative Research: Developing a Next Generation Concept Inventory using Constructed Response for evaluating student knowledge of complex FEW systems in environmental education"
- Invited conferences (30 min)
 - iii. Hannah - explore possibility of hosting at [VT NCR facility](#) again
 - 1. What is the theme (problem) to draw people in to join the conference, and post this on the website.

5.5.7. Project Timeline - A timeline for project activities is presented in Table 2.

	Year 1	Year 2	Year 3	Year 4	Year 5
Leadership team meetings	*1 (quarterly)	*1 (quarterly)	*1 (quarterly)	*1 (quarterly)	*1 (quarterly)
Working group meetings	*1,2,6 (quarterly)	*1,2,6 (quarterly)	*1,2,6 (quarterly)	*1,2,6 (quarterly)	*1,2,6 (quarterly)
Invited conference		*1-6			*1-6

Table 2:
Project
Timeline

Webinars and newsletter	*1-3 (quarterly)	*1-3 (quarterly)	*1-3 (quarterly)	*1-3 (quarterly)	*1-3 (quarterly)
Teaching (and research tools)					
Literature reviews		*1-3	*1-3		
Grant proposals			*1-3	*1-3	
Training workshops		*1-3	*1-3	*1-3	
Training module				*1-3	*1-3
Edited book					*1-3
Website	*1-3	*1-3	*1-3	*1-3	*1-3
Project evaluation		*1,2,4,5	*1,2,4,5	*1,2,4,5	*1,2,4,5

*1Leadership team 2Working groups 3Participants 4Advisory Board 5Ex evaluator 6Administrative support

LUNCH (60 min)

- o External evaluation (30 min)
 - i. The survey should be ready for the Working group meetings. The survey might need to be ready in a month.

4. Leadership team meeting/wrap-up (90 min)

5. Newsletter

- o Have a newsletter person?
- o Have focused sections, consistent areas, leadership team message,
- o Structure and approach for generating content - crowdsourcing
 - ii. Ask people to contribute to a theme about their work
- o

