

## **S-1071 Meeting minutes**

### **Program notes for S-1071**

#### **Attendees:**

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Kevin Curry, Penn State, [Kevincurry@psu.edu](mailto:Kevincurry@psu.edu)

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Donna Westfall-Rudd, Virginia Tech, [mooredm@vt.edu](mailto:mooredm@vt.edu)

Hannah Scherer, Virginia Tech, [hscherer@vt.edu](mailto:hscherer@vt.edu)

Katie Stofer, University of Florida, [stofer@ufl.edu](mailto:stofer@ufl.edu)

Jonathon Ulmer, Kansas State, [julmer@ksu.edu](mailto:julmer@ksu.edu)

Kasee Smith, University of Idaho, [klsmith@uidhaho.edu](mailto:klsmith@uidhaho.edu)

Kate Shoulders, University of Arkansas, [cshoulde@urk.edu](mailto:cshoulde@urk.edu)

Aaron McKim, Michigan State, [amckim@msu.edu](mailto:amckim@msu.edu)

Catherine DiBenedetto, Clemson, [cdibene@clemson.edu](mailto:cdibene@clemson.edu)

Rebekah Epps, University of Kentucky, [rebekah.epps@uky.edu](mailto:rebekah.epps@uky.edu)

#### Monday, May 14

During a working dinner members in attendance discussed business including the election of officers and project logistics (how to join, annual individual reporting, etc.). Members were asked to consider serving in a leadership role and to be prepared to make nominations the following day.

#### Tuesday, May 15

Updates from Administrative Advisor: Lesley Oliver provided an administrative update to the group. Some attendees had not yet officially joined the group in the NIMSS system. It is important to document participation. Check with your Ag Experiment Station office for additional information and possible travel assistance.

If you have joined S-1071, you should also complete a Project Initiation in REEport to document your individual effort or your institution's (if more than one participant). Requires annual reporting immediately following the end of each federal FY.

The AFRI Education and Workforce Development RFA was released end of April. One program under which proposals can be made is Professional Development for Secondary School Teachers and Educational Professionals.

- Must have leadership development component
- Standard and Strengthening Grants limited to \$150K total for up to 3 years

The other competitive NIFA grant program released is Sustainable Ag Systems (SAS), which funds very large, integrated projects. There may be opportunities for members to participate in SAS proposal efforts at their institutions. Extension and/or education need to be integral parts of these proposals in order to be competitive for funding.

Lesley will follow up with Victoria LeBeaux at NIFA the following week to clarify if there would be other plans for funding opportunities and express some of the members' thoughts regarding the funding levels and other issues.

#### Project structure and leadership:

Current Chair Hannah Scherer led the group in a discussion of how the project is currently structured and the duties of the project leaders. Following some additional discussion and encouragement from the admin advisor, the following officers were selected for 2018—19:

Chair: Jessica Blythe, West Virginia University

Vice-Chair: Barry Croom, U. Georgia

Objective 1 Coordinator: Kasee Smith, University of Idaho

Objective 2 Coordinators: Aaron McKim, Michigan State /Tyson Sorenson, Utah State

Objective 3 Coordinator: Kevin Curry of Penn State offered to confer with Brian Myers (who was not in attendance)

It was suggested by the administrative advisor that the entire group or the objective subgroups maintain communication through quarterly conference calls.

Project Updates: Attendees went around the room to update the group regarding their activities and current issues their state may be facing in ag education as well as the objectives to which they felt they could contribute.

Hannah Scherer (Virginia)- Working as part of an NSF-funded research collaborative network working with small to medium sized farms and how technology can work for smaller producers. STEM education will be integrated with the program; can contribute to the identification of engineering concepts and core ideas as part of Objective 1. Also part of a group working toward a new Multistate project on food-water-energy nexus education.

Katie Stofer (Florida)- Current grant-funded project focused on teacher professional development related to education on pathogens and invasive species; includes collaborative design component and would contribute to Objective 2. Also involved in a project that is utilizing a role-playing game in STEM education.

Jonathan Ulmer (Kansas)- Trying to quantify how ag is included in all STEM in Kansas; working with ag ambassadors

Kasee Smith (Idaho)- Replicating work from her dissertation; looking at preferences and the order of presentation, how that impacts STEM integration in ag education.

Kate Shoulder (Arkansas)- Trying to identify barriers to STEM integration- why can some teachers integrate tools they are given to integrate STEM into their work while others cannot/do not feel they have the autonomy to do so. Also adapting a scale to measure professionalism within the profession and ways to integrate professional ID within Ag teacher professional development. Looking to apply to other states.

Aaron McKim (Michigan)- Looking at how to empower teachers to think about how they connect to the next generation AFNR science standards. Developed a tool- a “course report”- that provides information on how they can teach the concepts and get science credits attached to their ag courses. Users (used 304 times) indicated they felt more empowered.

Catherine DiBenedetto (South Carolina)- There are no science standards for ag education in South Carolina. Looking at resources available within Clemson and started developing some teacher enrichment experiences using plant propagation. 90% of secondary school with ag programs have greenhouses but not experience with using them as a science teaching tool. Working with Jessica on teacher reflection.

Jessica Blythe (West Virginia)- Working with plant science colleagues to develop “citizen scientists” starting in elementary school. Working with a private school started by parents in rural WV who are ready to develop a middle school built around permaculture. Research currently investigating teaching methods using interactive notebooks; want to look at content analysis data from them to see how they are used to teach STEM.

Kevin Curry (Pennsylvania)- Work in science literacy is looking to develop methods for teaching the scientific process and to clarify what constitutes science literacy and how is it being done (i.e., what practices are in use) in ag education. Participated in the Agricultural Inquiry Institute.

Tyson Sorenson (Utah)- Training teachers in what modern agricultural careers look like and what is needed to prepare students for them (e.g., drones, modern biotechnology). Integrating drone technology in the classroom; problem-based learning using drones for career development; looking to integrate a design piece.

Barry Croom (Georgia)- Working on developing methods to help teachers teach about big data; looking at ways to incorporate UGA’s cotton microgin to teach about technology and engineering in the classroom. Also has a citizen-led pollinator education project with funding from NRCS.

Donna Westfall-Rudd (Virginia)- Planning for a USDA PD-STEP proposal resubmission and will be partnering teachers with faculty on campus. Will involve spending more time in the laboratory to help

them able to use more modern technology in the classroom. Also developing a project looking at identity and inclusion in Agriculture.

Melanie Link-Perez (Oregon), not in attendance, submitted via email

Beyond the Bean Seed (BTBS) is a YouTube series (<https://www.youtube.com/channel/UCWujRCTgYlQkEZQPrWtq4fw>) with the goal of stimulating educators to bring more plant-based activities into their classrooms while empowering them to be successful in these efforts. With the series, I am establishing a virtual mentoring and workshop space where I am partnering with K-16 educators. The videos demonstrate techniques and classroom activities in a format that is engaging, accessible, and encouraging. The video descriptions for episodes will include instructional text, links to resources, and information about how content aligns with Next Generation Science Standards and with ASPB's 12 Principles of Plant Biology.

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Some members of the group had to leave the meeting but remaining members continued discussion on progress and plans for the project:

Objective 2: Discussion focused primarily around a strategy to attract external funding to support teacher observations and participation costs. Primary needs are for incentives for the teachers, travel and students to do the observations. Willing to revisit a resubmission of the proposal to the Dept. of Education led by Donna a couple of years ago. The group was just not able to get a resubmission together last year but there seems to be strong interest in trying again.

Donna shared the old proposal and reviewer comments in the google drive (<https://drive.google.com/drive/folders/0Bw0diBUWrnLjVFRnVWJoalVWdlk>) and the group discussed possible participation in a resubmission later this year. Interest in participating in the next proposal was expressed by Jessica, Donna (willing to lead again), Rebekah, Aaron, Katie and Tyson.

Objective 3: The innovation configuration map was completed previously and underwent an extension review process. S-1071 participants were involved in some of the teams that reviewed the process of determining what are the best resources and how should they be utilized. Waiting to get an update on where that is from Brian Myers. The group shared thoughts on dissemination of the map. Ideas included using AAEE regional meetings, teacher education caucuses, presenting at state teacher conferences or to state advisors who meet during the national FFA convention. The map needs to be released in a way that allows for its use and subsequent impact to be measured. The map could be touted as a way to establish new programs and help state staff when they go into districts to evaluate. There was a question about whether there was a crosswalk with the national science standards. People indicating participation with this objective include Kevin, Catherine, Kate and Andrew Thoron (not present but previously expressed willingness to assist with assessment).

Objective 1: NGSS Disciplinary Core Ideas paper is forthcoming from Florida group (Brian Myers can provide update). Interview protocol is approved through Virginia Tech's IRB for piloting interviews with Agricultural Science faculty about NGSS Crosscutting Concepts. Kasee is taking lead on this. Hannah will remain involved.