

Improvement Science, Mentoring, Industry Connections



# FIRST2 NETWORK

## Spring Conference 2023

*May 11 - 13 at Stonewall Resort*



*Funded by the National Science Foundation*



*Sponsored in part by AVN*

### **Session Title: Centering Student Leadership in Institutional Teams, A Roundtable**

**Presenter:** Sarah Riley

**Abstract:** This is an interactive working session with student leaders, institutional leaders, and other network stakeholders to discuss and develop effective strategies for centering student leadership and student experience in institutional teams strategy for improving policies and practices to have their institution retain and graduate more students in STEM.

**Learning Outcomes:** Derive strategies together for effectively centering students in institutional teams.

### **Session Title: Keynote: Decisions to Study and Persist in STEM: Students' Backgrounds and Influence of a Statewide Network**

**Presenters:** Marjorie Darrah, Ph.D., Roxann Humbert, Ph.D., and Christopher Wheatley

**Abstract:** In this session, we will discuss the factors that encourage students to major in STEM and investigate the participation in the First2 Network that encourages students to persist in these majors. We will consider the locales where they grew up and the students' backgrounds (including first-generation level). We will discuss WV county locale factors (i.e. percentage of the population with degrees, high school size, AP courses offered) that seem to encourage students to study STEM. We have defined a set of locale codes for WV and have determined differences in locale percentages of students who choose STEM majors and persist in STEM majors. We will look at both intrinsic and extrinsic student background factors (i.e. the desire for good income or family members that attended college) that encourage students to choose a STEM major. We have also defined different levels of "first-generationness" and found several factors that differ by these levels. Finally, we will discuss how students' participation in a statewide network affects their

persistence in a STEM major. We will explore the growth of the statewide network (especially through student involvement) and consider how students who are more connected in the Network have increased persistence.

**Learning Outcomes:**

1. Participants will identify areas of WV that send more students to major in STEM at WVU.
2. Participants will identify intrinsic and extrinsic factors that encourage first-generation students to study STEM.
3. Participants will compare the growth of the First2 Network over the last five years.

**Discussion Questions:**

1. What factors play a role in first-generation students' decisions to study STEM?
2. First-generation college student covers a wide range of backgrounds. How can we identify and help the ones who may face the most challenges?
3. How do we sustain the growth of the network after the grant funding is gone?

**Session Title: Keynote: How a Patchwork of Data Can Tell the First2 Network Story**

**Presenters:** Johnavae Campbell, Ph.D., Kimberly Cowley, Ph.D.

**Target Audience:** All attendees

**Abstract:** The First2 Network is a collective impact alliance funded by the National Science Foundation that seeks to improve the early persistence of rural, first-generation science, technology, engineering, and mathematics (STEM) college students in their programs of study across West Virginia. As the external evaluator for this grant, ICF is conducting a multi-method descriptive study to understand the project from various stakeholder perspectives via an array of data collection techniques that are summarized using four analytic levels: (1) state-level context, (2) First2 Network structures and processes, (3) systems targeted by the First2 Network, and (4) impact of the First2 Network.

Just as a patchwork quilt is composed of any number of differently patterned blocks, that when stitched together create an integrated piece of art, so too does the evaluation consist of numerous blocks of data that, when stitched together, creates a comprehensive overview of the First2 Network's progress and accomplishments. For this presentation, the ICF evaluation team will share a subset of Year 4 findings from each of the four analytic levels, including a state-level contextual description, a description of the First2 Network membership, working group self-assessment results, network value survey results, intern survey results, and student focus group results.

Viewed independently, each data set provides a slice or specific lens through which to study the First2 Network. When viewed collectively, these data sets present a more holistic picture of the First2 Network as it works to improve the persistence of rural, first-generation STEM college students.

**Learning Outcomes:**

1. Gain a better understanding of recent evaluation findings.
2. Gain a better understanding of how using mixed methods can help place findings in context and add richer detail to conclusions.

**Discussion Questions:**

1. What's something you learned about the First2 Network from the evaluation results?
2. What one word would you use to sum up the evaluation findings?
3. What questions do these findings bring to mind about the First2 Network?

## Session Title: A Day in The Life of a College Student

**Presenters:** First2 Network Students

**Target Audience:** All attendees

**Abstract:** First2 students have noticed that there is a bit of a disconnect between staff and students when it comes to schedules and feel as though some staff do not realize how busy students are. To bridge this gap in communication, students will discuss what a day in their life is like as a first generation underrepresented student in post-secondary STEM majors.

**Learning Outcomes:**

1. Understand how busy students are
2. Discuss struggles students may face in their day to day life
3. Increase understanding to then create better ideas on retaining students

**Discussion Questions:**

1. How can we better support students during their day to day life
2. What is expected of students outside of academia? (ie working, clubs, research, etc)

## Session Title: First2 Campus Clubs

**Presenters:** First Network Students

**Target Audience:** Students, Higher Education Faculty, Higher Education Staff

**Abstract:** This presentation is focused on how the club operates across the different First2 campuses and their ability to create events that increase student success and sense of belonging. The clubs boost network engagement and also provide students with a group of peers that can provide assistance and advice to incoming students.

**Learning Outcomes:**

1. Club benefits
2. How students utilize club time and resources

**Discussion Questions:**

1. How can network clubs be improved?
2. How do students feel about the clubs?

## Session Title: Keynote Student Panel

**Presenters:** First2 Network Students

**Target Audience:** All attendees

**Abstract:** This session will be a panel on the first2 student experience. A group of students will share their experiences in response to questions gathered both before and during the panel. The topics covered will relate to the entire student experience including but not limited to first2 clubs, the first-generation experience, modern student life on campus, and experiences as a STEM major.

**Learning Outcomes:**

1. To provide a deeper understanding of the student experience.
2. To determine the gap of knowledge between the faculty and student experience.

## **Session Title: Active Learning in STEM, A Roundtable**

**Presenter:** Sara Sawyer, Ph.D.

**Target Audience:** Students, Higher Education Faculty

**Abstract:** As most of us know, active learning techniques in STEM courses can help all students, but especially First-Gen and under-represented minority students succeed in these classes. However, most faculty were not taught using active learning techniques and changing teaching styles to incorporate more active learning techniques is important but can be difficult. This session is time for faculty to exchange ideas on teaching techniques that they use that they find useful, to discuss ways to better implement techniques, or to discuss other aspects of how to help students better succeed in STEM courses. Student input is welcome.

### **Learning Outcomes:**

1. Strategies for active learning.
2. Using active learning in the classroom

### **Discussion Questions:**

1. What active learning strategies do you use in your classes?
2. What strategies would you like to become better at using?
3. What active learning strategies do you find most useful?

## **Session Title: Careful Conversation: Inclusive Communication in the 21st Century.**

**Presenter:** Ashlea Krasnansky

**Target Audience:** All attendees

**Abstract:** Usually, social interactions within the professional environment are facilitated with good intentions. Although, with a vast and rapidly changing world, conversations can seem more difficult to carry. Namely, difficult topics that arise during conversation usually surround preferred pronouns, comfortability, and support. This session will include two main sections: presentation and practice. The presentation section will utilize a visual slideshow to provide a brief background to the increased connectivity that exists within the modern communicative sphere in addition to identifying difficult conversation topics, suggesting inclusive practices, and emphasizing the importance of such practices. The second part of the session, practice, will provide the session participants the opportunity to network with each other while practicing their skills in a safe place. Although jargon relating to the fields of communication studies and diversity-equity-inclusion (DEI) studies will be present in the session, these terms will be thoroughly explained and appeal to various learning styles; this session is created with all levels of scholarship in mind—it is open to everyone.

### **Learning Outcomes**

1. Participants will be able to reframe traditional conversation ideology to compensate for modern inclusivity practices.
2. Participants will better understand the fundamental basis of and complexities that surround modern communicative practices.
3. Participants will further understand the professional value and significance of inclusive conversations.

### **Discussion Questions:**

1. What is the best take-away from this session to you?
2. How might you go above and beyond to implement these practices not only in your conversations but your life overall?

## **Session Title: The West Virginia Jobs Network and Students**

**Presenter:** Stephen Jackson

**Target Audience:** All Attendees

**Abstract:** Attendees will learn about the ARC funded initiative known as the WV Jobs Network (WVJN), and how this Network is working to connect employers in the Mountain State with graduating students.

## **Session Title: NSF S-STEM Track 3 (Inter-institutional Consortia) Proposal Opportunities**

**Presenter:** Kenan Hatipoglu, Ph.D.

**Abstract:** Exploring opportunities for NSF S-STEM Program Track 3 projects that support multi-institutional collaborations that focus on a common interest or challenge. Inter-institutional Consortia projects represent diverse collaborations, including partnerships between 2-year colleges and 4-year colleges and universities, between 4-year colleges and graduate programs, or between comparable institutions looking to implement and study parallel interventions.

### **Learning Outcomes:**

1. Discover the partnership opportunities among institutions of higher education in West Virginia to tackle a S-STEM Track 3 project.
2. Identify a common interest or challenge.
3. Discover the ways to establish an authentic, strong and mutually beneficial collaboration across all institutions.

### **Discussion Questions:**

1. Is an NSF S-STEM Track 3 project good for West Virginia and is it attainable?
2. Will it be manageable?
3. Who would like to be involved and/or lead?