

Experiences of the Virtual 2021 Midwest Noyce Regional Conference
by
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The National Science Foundation's **Robert Noyce Teacher Scholarship Program** supports talented science, technology, engineering, and mathematics (STEM) majors and professionals to become K-12 mathematics and science teachers in high needs schools. The program invites creative and innovative proposals that address the critical need for recruiting and preparing highly effective elementary and secondary science and mathematics teachers in high-need local educational agencies. Over the past decade, Illinois State University has received three grants to support teachers in Illinois and across the Midwest. Two of these projects have directly supported students at Illinois State University and the third project organizes and delivers programming to Noyce personnel across the Midwest.

One of the benefits of participating in a Robert Noyce Scholarship program is the opportunity to attend regional and national conferences that bring the Noyce community together for inspiration, collaboration, and sharing between projects. Since 2017 ISU has been the lead organizational partner for the annual Midwest Regional Noyce conference. Planning for the 2020 conference began in fall of 2019, with the conference scheduled for October 2020. As the COVID-19 pandemic became the new reality, the call was made to delay the conference until February 2021, with hopeful optimism for an in-person conference. That optimism quickly faded as the Midwest conference planning committee made the decision to host an all-virtual conference – the only Noyce region in the country to attempt holding a conference in a virtual format.

The 2021 virtual Midwest Noyce conference took place from February 5-11 with the theme of *Fostering Equity and Culturally Relevant STEM Practices for COVID-19 and Beyond*. Over 200 Scholars, Fellows, and Principal Investigators from Noyce projects across the Midwest registered for the conference, along with attendees invited from the Western Regional Noyce Alliance (WRNA). The conference kicked off Friday evening with a virtual poster session embedded in Padlet technology, including Zoom links with each poster that enabled attendees to have conversations with presenters. While this format does not compare to the face-to-face social interactions of typical poster sessions, it certainly proved to be a nice alternative based on positive feedback from attendees and presenters.

The conference continued through the weekend, starting with the opening plenary hosted by Dr. Jessica Krim (Southern Illinois University Edwardsville), who skillfully moderated the sessions designated for all conference attendees. Dr. Samuel Museus, Professor of Education Studies at the University of California in San Diego, gave an inspiring keynote speech on how to move to a more inclusive and equitable STEM education, acknowledging the significant role of STEM fields on sociopolitical issues that impact marginalized communities, yet often fail to value and include diverse perspectives in their endeavors. Dr. Museus spoke on the role of teachers in helping to support “Cultural Engagement” in STEM, stressing that “equity is not an add-on”. It should be an integral component of STEM teaching that emphasizes cultural connections, relevance to the community, and a collaborative mindset.

The weekend included four breakout sessions, a networking social event, and a Plenary to wrap things up on Sunday. Dr. Sandra Richardson, Program Director for the National Robert Noyce Scholarship Program, spoke to Principal Investigators with a concurrent plenary for Noyce Scholars and Fellows, providing information on the sub-grant opportunity (see below) and submission of a shared resource

stemming from the conference experience and inspired by the theme. With Monday being an off day, the last three days of the conference included twelve breakout sessions, ranging in start times from 10:00am to 8:00pm. This provided flexibility for attendees, understanding that participants could not attend all sessions but the times would accommodate all schedules to some degree. This proved to be a good approach to the virtual conference, with most breakout sessions having around 20 participants throughout the conference week.

Tuesday included a second keynote speaker, Dr. Natalie Johnson, Department Chair and Assistant Professor of Mathematics at National Louis University. Her many accomplishments include receiving the U.S. Presidential Award for Excellence in Mathematics and Science Teaching and founder/CEO of READit, an education consulting firm specializing in closing the achievement gap across the U.S., college and career readiness, and financial literacy. Dr. Johnson shared her perspective and insight on the conference theme of *Fostering Equity and Culturally Relevant STEM Practices for COVID-19 and Beyond*, acknowledging how Culturally Relevant Teaching empowers students to succeed and provides access to STEM fields that are lacking diversity.

One of the unique features of the 2021-2023 Midwest Noyce Conference plan is the addition of weekend and weeklong summer professional development workshops, hosted and led by Noyce Project P.I.s from institutions across the Midwest. Five workshops will take place in 2021 and seven in 2022. These workshops are cost-free and open to any Noyce Scholar, Fellow, or project personnel in the Midwest region. A fellowship grant is offered to attendees to cover materials, food, and travel expenses. Most workshop leaders held a preview session during the 2021 conference to give participants a taste of what to expect during the workshops. The 2022 conference will preview the workshops taking place in summer 2022. Registration for the workshops is open and accessible through this link, along with details about each workshop: [Click here for information and links to register for the Midwest summer workshops.](#)

The conference wrapped up on Thursday evening with the announcement of winners of the Midwest Noyce sub-grant opportunity. The purpose of sub-grants is to encourage collaboration between Noyce projects and to make curricular connections to the community, emphasizing the teaching and learning of STEM practices in culturally relevant ways. Attendees at the Midwest Noyce conferences are eligible to apply for funds ranging from \$1,500-\$3,000 to support curricular projects stemming from conference themes. Two projects won awards in 2021. Tiffany Sulser from Sesser-Valier School District #196 and Craig Kirchner from DuQuoin High School C.U.S.D. #300 were awarded \$3,000 for their project – *A Sense of Place: Using Place-based Instruction to Teach Life, Earth, and Environmental Sciences in Rural Elementary and High School Classrooms*. A second award of \$3,000 was given to Jessica Hesler from Elkins High School who will partner with multiple teachers from Elkins Primary, Elkins Elementary, and Elkins Middle School on their project titled - *The Connections of STEM Learning Across the District and the Community*. A new round of sub-grant awards was announced at the 2021 conference with a submission deadline of March 8, 2021.

Overall, the 2021 virtual Midwest Noyce conference was a huge success, with attendees raving about the quality of presentations and the inspiring words of keynote speakers. None of this was possible without the hard work and collaboration of the conference planning committee members. A huge thank you to everyone involved in making the most of a challenging situation – holding a conference meant to

bring people together in a virtual format. We look forward to next year's in-person conference near Mammoth Cave in Kentucky, which will focus on rural STEM education as well as urban STEM education.