CIRCLES ALLIANCE Newsletter
Early Fall 2024

Quarterly Notes from the Cultivating Indigenous Research Communities for Leadership in Education and STEM (CIRCLES) Alliance

Preview: The 2024 CIRCLES Alliance Gathering

This October 17-19, 2024, the CIRCLES Alliance will gather with advisors and partners in Wyoming to learn, collaborate, plan, and reflect. Below are just a few of the anticipated highlights of this year's CIRCLES Alliance Gathering.

Keynote

Dr. Shane Doyle (Apsáalooke) will lead a keynote session at the Gathering. Dr. Doyle played a role in the early implementation of Indian Education for All in Montana, and he remains an influential educator and advocate for Indigenous ways of knowing in education. As a prolific scholar, artist, and lecturer, he is a frequent guest on podcasts, blogs, and other multi-media spaces. Two resources that we recommend are:

"Sacred Spaces," an interview and educational resource from MontanaPBS

"Shane Doyle (Apsáalooke/Crow) Sings Doorway Style Song," a virtual short talk with the Montana Historical Society

Site Visit

At the Wind River Tribal Buffalo Initiative (WRTBI), executive director Jason Baldes (Eastern Shoshone) will lead a site tour and talk engaging the CIRCLES Alliance with WRTBI's mission of "land rematriation, community revitalization, and youth education through restoration of conservation Buffalo." Before visiting WRTBI, you may wish to explore:

"The Wind River BioBlitz," a story by Audubon about the summer 2024 community science event that wove together traditional ecological knowledge and Western science. CIRCLES' Wyoming and evaluation teams participated in the Bioblitz.

"The American Buffalo Homecoming," a companion film to Ken Burns's documentary series. Directed by Julianna Brannum (Comanche), the film tells the story of the return of buffalo to the Wind River Reservation and other tribal communities.

A Conversation with Jayden Bear, CIRCLES Graduate Assistant

Through the CIRCLES Alliance, Jayden Bear worked as a graduate assistant with Dr. Daniel Conn at Minot State University in North Dakota while completing her master's in education. She is currently finishing up a capstone research project, "Data-Driven Decision Making and Student Achievement." Jayden recently sat down with us to share some of her experiences, both in her work with CIRCLES and beyond.

Jayden with her husband and daughters on a trip to Alaska.

Please tell us a bit about yourself.

I'm a mother to three daughters, ages ten, seven, and two. I'm married to my high school sweetheart; we will have been married a decade next year. I'm an enrolled member from the Three Affiliated Tribes. I'm Arikara and Sioux from the Lower Brule Tribe in South Dakota as well. I was born and raised in New Town, North Dakota. I've worked for the Three Affiliated Tribes' Head Start for about nine years. I'm really involved in my community; I was the high school volleyball coach for a long time but took a step back to pursue my education. My husband and I are building our forever home, and we just bought pigs and chickens.

What motivated you to pursue a career in education?

I wanted to go to school for cosmetology, but my plan just didn't work. My grandma worked over at the Head Start for over forty years, and then I started here. I wanted to help make a difference in kiddos' lives. I wanted to help them strive for more and show them that they can do anything they put their mind to. With education I just feel that it's something that no one can ever take away from you.

What aspects of your work with CIRCLES have you enjoyed the most?

I really enjoy working with Dr. Conn. He's such an awesome person to work with, to sit there and throw ideas out. He's very fun and easy to work with. I've liked learning more with CIRCLES about STEM, because we just don't have STEM for the Head Start ages. It's been busy, but I like being busy.

Is there anyone who has been an important mentor or role model for you?

I have quite a lot of people who have helped me get to where I am. For my education, both my parents. A lot of my education was for my kiddos—me showing them not to give up. My husband has been my biggest support system. Kelly Bradfield (director of the Three Affiliated Tribes Head Start Program) has been a huge impact and support in pursuing my education.

CIRCLES Partners Celebrate New NSF E-CORE Awards

The National Science Foundation has awarded funding for E-CORE RII projects in South Dakota and New Mexico. E-CORE—which stands for EPSCoR Collaborations for Optimizing Research Ecosystems Research Infrastructure Improvement Program—supports efforts to build capacity for research within the 28 EPSCoR jurisdictions across the U.S. and U.S. territories and commonwealths. CIRCLES Alliance team members are collaborators on two newly funded E-CORE projects, which will provide avenues for deepening STEM education partnerships in tribal communities across these states.

In **New Mexico**, NM EPSCoR will lead the "Research Infrastructure Optimization for New Mexico" (RIO-NM) project, a transformative initiative connecting New Mexico's significant research resources with its network of Emerging Research Institutions. Building upon years of experience in managing expansive research collaborations, RIO-NM represents the next evolution of the NM EPSCoR's work, guided by the strategic vision and continued support of the New Mexico Jurisdictional Steering Committee. The project unites researchers and administrators from institutions across New Mexico in a highly collaborative effort led by NM EPSCoR and the University of New Mexico, along with the following core partners: Navajo Technical University, New Mexico Institute of Mining and Technology, Central New Mexico Community College, and New Mexico State University. *Continued on p.4*

A researcher presents at the New Mexico Research Symposium organized by NM EPSCoR and many partners. Photo: Bret Latter

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New Mexico's E-CORE project is structured around three core areas:

1. Cyberinfrastructure Core: Focused on the intersection of digital and institutional interconnections to ensure robust cyberinfrastructure for research, provide access to research platforms, and facilitate the discovery and utilization of research resources statewide;

2. Research Pathways Core: Aimed at developing opportunities for New Mexico students and faculty, with a focus on Emerging Research Institutions, to participate and advance in New Mexico's larger research ecosystem;

3. Administrative Core: Tasked with providing overall coordination and support for the initiative and developing the Science and Technology Plan for New Mexico to ensure sustainable and cohesive growth of New Mexico's research ecosystem. RIO-NM will implement pilot projects and seed funding initiatives to test and scale new approaches to building research infrastructure.

According to NM EPSCoR Associate Director and NM CIRCLES lead Selena Connealy, "My work with the CIRCLES Alliance has helped me to build relationships with tribal colleges and tribal serving institutions across New Mexico and that work informed both the goals and core partners for RIO-NM." In addition to core partner NTU, RIO-NM will seek to engage other tribal institutions around research cyberinfrastructure and research pathways, including Southwestern Indian Polytechnic Institute (SIPI), Institute for American Indian Arts (IAIA), and Dine College.

In **South Dakota**, a team led by the Center for Advancement of Math and Science Education at Black Hills State University will work to meet the challenges of creating pathways for young learners to develop interest and confidence in STEM and become motivated to work in STEM fields across their largely rural jurisdiction. The project is focused on six goals, which also support the goals of the CIRCLES Alliance: **1.** Enhance the ability of STEM researchers to engage effectively with K-12 educators and students, the general public, and other audiences across South Dakota, including in tribal communities.

South Dakota's E-CORE project will support educators in adopting place-based, culturally relevant approaches, such as in this summer 2024 CIRCLES workshop. Photo: Stephanie Higdon

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2. Identify and nurture STEM teacher leaders, equipping them to strengthen STEM education within their school buildings and districts and to advance STEM education across the state. Through partnerships and relationships made through the CIRCLES Alliance, teacher leaders in tribal communities will deepen their leadership skills through professional learning, become master teachers in their classroom, act as leaders in their school, and provide opportunities for colleagues and students to engage in rich STEM experiences.

3. Enhance the ability of all K-12 teachers to deliver high-quality STEM instruction, especially those who serve rural and Native American populations.

4. Strengthen students' level of interest, sense of belonging, and academic preparation in STEM – from kindergarten through post-secondary. For students to pursue STEM disciplines and STEM careers they need opportunities to see themselves as STEM learners and build their STEM identity. Work under this goal includes funding for tribal colleges to host summer bridge programs designed to help students transition from high school to college by building their STEM identity and providing them with place-based research frameworks incorporating wólakȟolkičiyapi (learning Lakota ways of life for the benefit of the community) and collaborative approaches to problem-solving.

5. Disseminate research findings relevant beyond South Dakota about STEM teacher leadership, building student identity in STEM, and factors important in supporting Native American students in STEM.

6. Guide and support South Dakota's Jurisdictional Steering Committee in areas related to STEM education, research-education partnerships, and collaborations with Tribal Colleges.

Additional project partners include: Augustana University, Dakota State University, Norther State University, Oglala Lakota College, Sinte Gleska University, Sisseton Wahpeton College, South Dakota Mines, South Dakota State University, University of South Dakota, Sanford Underground Research Facility, South Dakota Board of Regents, South Dakota Department of Education, South Dakota Discovery Center, South Dakota School for the Blind and Visually Impaired, and Inverness Research.

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