Introduction
The Diné Institute for Navajo Nation Educators (DINÉ) is a partnership between Northern Arizona University and Navajo schools aimed at strengthening teaching in K-12 schools serving Diné and other Indigenous students. The DINÉ engages all interested teachers in long-term professional development seminars to increase content knowledge, curriculum development skills, capacity to deliver culturally responsive lessons, and leadership ability.

DINÉ guiding principles:

- Diné and other Indigenous youth, teachers, elders, and communities are rich sources and sites of knowledge.
- Culturally responsive schooling is a best practice, and the DINÉ integrates Navajo traditional knowledge throughout all aspects of our teaching, learning, and leading.
- Initiatives that strengthen teaching through culturally responsive professional development will in turn improve the educational attainment of Diné and other Indigenous youth, which is a necessary component for tribal nation (re)building goals of sovereign Native Nations in the U.S.

Key Elements
- Set of annual seminars led by university faculty on various topics relevant to K12 content standards
- DINÉ is K12 teacher driven

2021 Updates
- Total teachers completing the program, and total # of teacher-authored curriculum units: 55
- Teachers currently in the 2021 cohort: 35

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Strengthening STEM teaching in Native-serving schools through long-term, culturally responsive professional development

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**NSF Project**
This is a 4-year, level II Exploratory study within the teaching strand of DRK12.

There is a long-established body of knowledge about effective professional development (PD) for STEM teachers, but very little of it has been applied and studied in Indian Country. This project will substantially grow the data and knowledge available within this unique context; it will also provide concrete examples and knowledge about the ways culturally responsive approaches to STEM PD, curriculum development, and teacher practice are taken up in distinct Indigenous-student-serving contexts.

**Research Questions**
Through a collective case study methodology, we are exploring the following research questions:

1. To what extent and in what ways does a nationally-implemented professional development model for urban teachers translate and operate with teachers from schools in two distinct rural, Indigenous communities?

2. To what extent and in what ways does the DINÉ professional development model impact teachers’ STEM curriculum development and instructional practice in Native-serving schools?

3. To what extent and in what ways are culturally responsive approaches to STEM curriculum development and instructional practice engaged by teachers in the DINÉ?

**Updates as of June 2021:**
- We developed a rubric for assessing Culturally Responsive Schooling principles in Indigenous-serving schools. We piloted this to analyze the 2019 teacher-authored curriculum units.
- We just started a new cohort of 32 teachers in the 2021 cohort, so we will collect a full set of data with this cohort by the end of the year.

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