

Precipitating Change With Alaskan And Hawaiian Schools Exploring Coasts And Coastal Change

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June 2023

Emerging Research & Design Themes

CONTEXT

We are a partnership bringing together Alaskan and Hawaiian schools in predominantly Native communities; local cultural knowledge holders; and a mix of Indigenous and Eurocentric scientists, educators, and researchers. Together, we are exploring approaches to designing, trying out, and refining multi-perspective, middle school science instruction exploring coasts and coastal change.

QUESTIONS WE ARE EXPLORING

- (How) can multiple perspectives be appropriately included in instruction in ways that demonstrate equity, respect, and value rather than some perspectives being represented in deep ways while others are represented in shallow ways?
- What does "learning" look like when it authentically represents multiple perspectives?

WHO WE ARE

This poster represents talking relationship building by: Bruce Watson, Carolyn Staudt, Texas Gail Rauymond, David Reider, Noelani Puniwai, Ho'oulu'āhui Erika Perry, Tom Moher, Lorraine A. Masterman, Joy Massicotte, Nathan Kimball, Sarah Haavind, Nicollette Frank, Beth Covitt, and Dale Cope.

REFERENCES

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This work is supported by NSF award DRL-2101198. Any opinions, findings, and conclusions or recommendations expressed here are those of the authors and do not necessarily reflect the views of the National Science Foundation.

Relationships with place are complex and varied (e.g., caring for vs. resources from). Peoples' relation to place is larger than the "scientific method" used to study it.

The complexities of language and the inadequacy of translation pose challenges to intercultural understanding and adequately representing multiple perspectives. E.g., starting with English means starting with an imbalance.

"Māori [or Indigenous] knowledge is not necessarily restricted to the three-dimensional reality of the laws of physics, and therefore may have access to wisdom that western science has disallowed within its canon." (Stewart, 2023)

Historic and ongoing colonialism, and the implications thereof are central to our collaboration— we are learning to sit with discomfort and engage in unsettling discourse. (Medin & Bang, 2014)

"When we say, Indigenous perspective, where is that coming from? What do we mean? Where are the Elders?" We're not there, but how much closer can we get to authentic and equitable inclusion/representation of perspectives?

RELATIONAL EVIDENCE

We draw on relation-based evidence including discussions and classroom artifacts and performances to inform both both curricular design and education research efforts.

Relationships are developed through care, which can be hard to achieve through an in-school, science unit. One way we are working on this is through a shift from a linear, activity-based unit toward a more fluid and flexible project-based unit with a student logbook and a community-facing final project.

We are and/or feel hampered by Western structures of schooling as we try to include multiple perspectives authentically and equitably in the designed unit.

HOW WE WORK

We meet regularly to discuss issues of: ontology (the nature of being and reality), epistemology (how we know), axiology (ethics and morals), and methodology (how we learn together) related to project instructional design and research. (Wilson, 2008)

We aim to build relationships and to better understand one another; we do not aim for consensus and thus, procedures such as interrater reliability do not make sense for our collaboration.

IMPLICATIONS

We are envisioning and testing the boundaries of "what is possible" for engaging students in exploring and making sense of their coasts through learning experiences that interweave Indigenous, Eurocentric, and other views of science, history, culture, and community decision-making.

