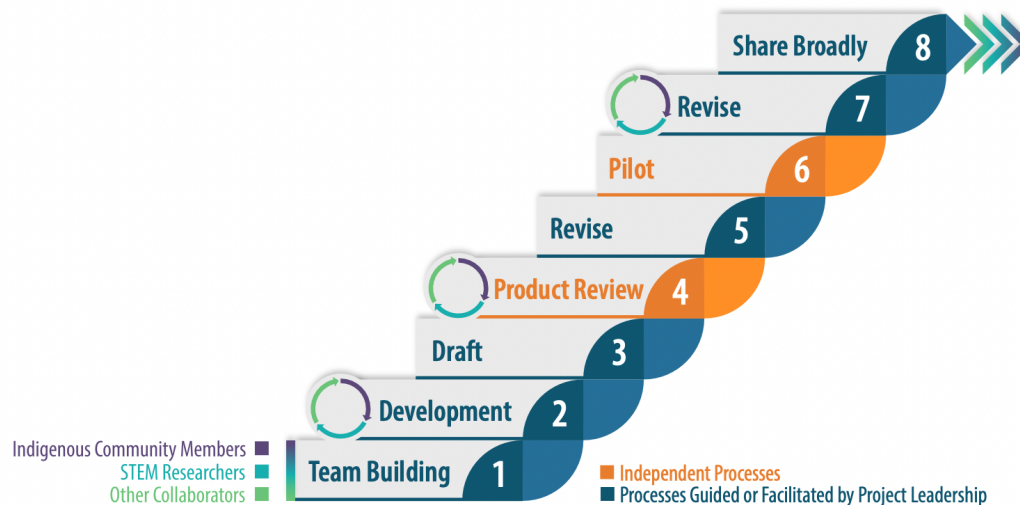


Cultural Connections to Alaska Science

Project research scaffolds upon prior work (NSF-DRK-12: 1812888) to explore the effectiveness of the Cultural Connections Process Model (CCPM). The model supports institutional + Indigenous co-production of place-based K-12 STEM education resources. The research is conducted by an Alaska Native researcher. Prior research tested the model in one rural Alaska school district (Northwest Arctic Borough) and grade level (middle school). This project applies the model to a different grade level (high school), four geographic regions of Alaska (northwest, interior, southcentral, southeast), and four Indigenous cultures (Iñupiaq, Gwich'in, Tsimshian, Sugpiaq).

Cultural Connections Process Model

for Co-Production of STEM Education Resources



The University of Alaska Fairbanks is built upon Troth Yeddha', the ancestral home of the Lower Tanana and Dené people. Their stewardship of the land over thousands of years makes our work possible. We appreciate the following Tribes and organizations for their commitment and support: Alutiiq Museum (Kodiak); Council of Athabascan Tribal Governments (Fort Yukon); Gwichyaa Zhee Gwich'in Tribal Government (Fort Yukon); Kodiak Archipelago Leadership Institute (Kodiak); Metlakatla Indian Community (Metlakatla); Native Village of Afognak (Kodiak); Native Village of Kotzebue (Kotzebue); Tangirnaq Native Village (Kodiak).

Co-PI Topkok's Indigenous research methodology, Katimarugut, was formalized in his dissertation with help from Iñupiaq participants (Topkok, 2015). The project's research methods align with: Guidelines for Respecting Cultural Knowledge (ANKN, 2000); Coolangatta Statement on Indigenous Rights in Education (Read, 2006); United Nations Declaration on the Rights of Indigenous Peoples (UN, 2007); "Mapquqput Iñuuniagnigmi" (Our Blanket of Life, NSBSD, 2010); the Iñupiat Iłitqusiat (cultural values) of the Iñupiat people of Northwest Alaska (ANKN, n.d.); the "Kheegwadadhaak'a" (We Just Keep the Fire Going) Framework (Fisher, 2018); "Liitukut Sugpiat'stun" (We Are Learning How To Be Real People, Drabek, 2012); and Raven Bloodlines: Tsimshian Identity: An Autoethnographic Account of Tsimshian Wil'naat'ał, Politics, Pedagogy, and Law, (Greening, 2017).

The project uses Community-Based Participatory Research (Barnhardt, 2005a; Castagno & Brayboy, 2008; Israel et al., 2008; U.S., 2013) and builds upon previous work testing the CCPM in Kotzebue, Alaska in collaboration with Hannah Paniyavluk Loon, Lena Suuyuk Hanna, Lance Qaluraq Kramer, and Macy Kikiktagruk Kenworthy.

References

- Alaska Native Knowledge Network (ANKN). (2000). Guidelines for Respecting Cultural Knowledge. Accessed May 24, 2023: <http://ankn.uaf.edu/publications/Knowledge.pdf>
- Alaska Native Knowledge Network (ANKN). (n.d.). Iñupiat Ilitqusiatic. Retrieved on May 24, 2023: <http://ankn.uaf.edu/curriculum/Iñupiaq/Ilitqusiatic/whatis.html>
- Barnhardt, R. (2005b). Culture, community and place in Alaska Native education. Retrieved 8/21/2017 from: <http://www.ankn.uaf.edu/curriculum/Articles/RayBarnhardt/CultureCommPlaceANE.html>
- Castagno, A., & Brayboy, B. (2008). Culturally responsive schooling for indigenous youth: A review of the literature. *Review of Educational Research*, 78(4), 941-993.
- Drabek, A. S. (2012). Liitukut Sugpiat'stun (We are learning how to be real people): Exploring Kodiak Alutiiq literature through core values. Retrieved May 24, 2023 from Alaska Native Knowledge Network, UAF: http://www.ankn.uaf.edu/Curriculum/PhD_Projects/AlishaDrabek/Drabek_Dissertation_Final.pdf
- Fisher, C. (2018). Diideets'ii in our pathway (in our future): Gwich'in educational philosophy and transformative praxis in K-12 education (Order No. 10789344). Dissertations and Theses at University of Alaska Fairbanks. (2041177155).
- Greening, S. (2017). Raven Bloodlines, Tsimshian Identity: An Autoethnographic Account of Tsimshian Wil'naat'al, Politics, Pedagogy, and Law (Doctoral dissertation, University of Northern British Columbia). doi: 10.24124/2017/58909
- Israel, B.A., Schulz, A.J., Parker, E.A., Becker, A.B., Allen, A., & Guzman, J.R. (2008). Critical issues in developing and following CBPR principles. In M. Minkler & N. Wallerstein (Eds.), *Community based participatory research for health: From process to outcomes* (2nd ed., pp. 47-66). San Francisco: Jossey-Bass.
- North Slope Borough School District. (2010). "Mapquqput Iñuuniagnigmi" translated "Our Blanket of Life." Retrieved May 24, 2023 from: https://www.researchgate.net/figure/Mapquqput-Iñuuniagnigmi-Our-Blanket-of-Life-NSBSD-2010_fig4_287646402
- Read, P., Meyers, G., & Reece, B. (Eds.). (2006). The Coolangatta Statement on Indigenous Peoples' Rights in Education. In *What Good Condition?: Reflections on an Australian Aboriginal Treaty 1986-2006*. Book Chapter, *Aboriginal History Monographs*, v.13, pp. 229-236. ANU Press. <http://www.jstor.org/stable/j.ctt2jbkr2.23>
- Topkok, C.S.A. (2015). Iñupiat Ilitqusiatic: Inner views of our Iñupiaq values. Unpublished doctoral dissertation. University of Alaska Fairbanks, Fairbanks, AK.
- United Nations (UN) General Assembly. (2007). United Nations Declaration on the Rights of Indigenous Peoples. UN Wash 12: 1-18.
- U.S. Department of Health and Human Services. Children's Bureau. Child Welfare Research & Evaluation Tribal Workgroup. (2013). *A roadmap for collaborative and effective evaluation in tribal communities*. Washington, D.C.: Children's Bureau, Administration for Children and Families.

This project is funded by the National Science Foundation, Grant #2201324. Any opinions, findings, conclusions or recommendations expressed in these materials are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

UA is an AA/EO employer and educational institution and prohibits illegal discrimination against any individual: www.alaska.edu/nondiscrimination.