

# For the Next Seven Generations: Hopes and Needs of Tribal Children as Expressed by the Tribal Leaders and Parents

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**Abstract:** There is a need to understand the science learning expectations and experiences of Native American children. In response, a needs analysis was conducted with a tribe from the Great Lakes region of the United States. I, a tribal member, conducted interviews and focus groups. Emerging themes include protecting tribal culture, scientific knowledge for tribal sovereignty, and STEM career options for youth. Each of the three areas is explored and with implications for future research.

## Introduction

American Indians and Alaska Natives (AI/AN) are underrepresented in the STEM fields, STEM majors, and college admissions (Landivar, 2013). This underrepresentation may negatively impact AI/AN tribes as they work to defend their rights and land, and the broader STEM community because of a lack of diverse thinking (Medin & Bang, 2014). AI/AN students have expressed that there was a disconnect between the STEM culture and identity and their own Indigenous cultural identity (Smith et.al, 2014). AI/AN people have been hurt and abused by past research and methods (Smith, 2013), having their knowledge, land, and resources stolen by others for financial gain and prestige. When the research is focused on AI/AN it is often on their pain, addictions, and the abuse they have received from others (Tuck & Yang, 2014) ignoring their strength and resilience. To counter this, studies need to work with AI/AN people, lifting up their hopes through their voices. This study begins this process by asking one mid-western American Indian tribe what they hope for and desire for their children as related to science learning.

## Conversational methodology

To understand the tribe's science learning goals a needs analysis (Coffing & Hutchinson, 1974) was conducted using focus groups and interviews with the Tribal Council and groups of Elders, parents, and young adults. I spoke with members during tribal events, developing a list of volunteers. Interviews were conducted with open ended questions. These semi structured discussions allowed for a conversational methodology (Kovach, 2010), a style of sharing knowledge familiar to AI/AN communities. During the meeting I took field notes, which I analyzed at the conclusion for initial themes and codes. Transcriptions were analyzed and coded. Codes were then compiled and explored individually with focused codes and memos documenting the patterns within each focused code.

## The tribe's hopes for their children

Members expressed the importance of learning tribal culture and Native identity, the role of science and scientific knowledge for tribal sovereignty, and STEM career options for youth. Each of these topics was mentioned in each focus group and almost every interview.

## Tribal culture and native identity

The most common hope and need brought up by Tribal members was learning and understanding culture and Native identity. Lola (all names are pseudonyms) shared, *"We're the next generation to be teachers. And, the elders have so much knowledge, but we're losing so many of them."* Tribal members expressed that while Elders possess traditional knowledge, that knowledge is not being passed on for a number of reasons. For example, when there are opportunities for learning it was difficult to attend due to travel distance and time constraints, leading to low attendance. Low attendance made some members feel as if it was a waste of time. These factors combine to create an environment where it is difficult to maintain the cultural teachings of The Tribe, increasing the loss of culture. This loss of culture can lead to feeling separated from The Tribe, as Jennifer said during her interview, *"But the piece that I feel that I'm missing, because I'm so far away from them, is the cultural aspect of it and having some connectedness."* The Tribe's members have spread out across their ancestral lands, North America, and the world. Members believe that if The Tribe hopes to remain a tribe, then it must find ways to connect members across generations, to support the sharing of teachings, and across distances, to rebuild and maintain the community.

## Science for tribal sovereignty

For members, it is essential that The Tribe express its sovereignty through sustainable living practices and protecting the environment. Erica said, “*Native Americans are very in tune with that, like with the water and climate change and so I think science for the future of our tribe would be to try to help our environment.*” For members of The Tribe science and science knowledge is essential to protecting the environment. Many members share the belief in the sacredness of water and their worries about the Earth. Members expressed that it is the role of Native Americans to protect the environment in order to pass that on to future generations and spread that ethical stance through teachings to all peoples. Steve said, “*I think as we share and learn... we can create a stronger nation... and how we can continue to improve to live.*” Not only is it important to share the knowledge for the protection of the Earth, but Native science practices can improve how all people live.

## STEM career options

Members have firsthand knowledge of their underrepresentation in stem fields and they see it as a major concern. Members are unsure of how best to guide the children of the tribe and they seek out experts for guidance. Some members have ideas; skilled trades, healthcare, sustainability fields to name a few. Others were unsure what options there were and unsure of how to find guidance for their own children. There may be a need for more support for the youth. While some universities and trade schools may provide guidance, members feel like it is not enough for their youth. Eric said, “*They don't feel like they have that support system with the university to retain them and keep them in that program, and keep it going.*” This lack of support from post-secondary learning experiences makes it harder for tribal youth to pursue the education needed to fill the current openings of the tribe, let alone those of the future, and has been supported by larger scale studies into STEM dropout rates (eg. Smith, Metz, Huntoon,& Moyer, 2014).

## Conclusion

The data from this study shows that the members of The Tribe have many shared hopes and needs as related to the education and future of their children. The first being the passing on the culture and a strong Native identity. Many feel the loss of culture and identity is eating away at The Tribe. These cultural learnings are essential in helping the youth understand not only why their benefits exist, but how to use them, and how to protect themselves in the future. They see this cultural learning as essential to developing a strong Native identity as the children engage with the dominant culture of the world. It is important that The Tribe’s children work to protect the land and water of the earth as these are sacred, and that they are knowledgeable in Western modern science. They see this as essential so that The Tribe can continue to lift itself out of economic poverty and contribute to solutions for protecting the environment. For members it is important that their children hold their Native identity and ethics above their science identity and that when there is conflict the children of the tribe know how to navigate the hybrid space.

These expressed needs support the ideas of Grande (2015) in the need for a decolonized learning experience for tribal youth. Members expressed frustration with the perceived differences in STEM culture and tribal culture. However, there is little direct understanding of how AI/AN students are impacted by colonized curriculum in the science classroom and almost no understanding of how a decolonized curriculum will impact AI/AN children’s learning. This study indicates that there is a need to develop and implement decolonized curriculum if we hope to support AI/AN people in reaching their own goals for their children.

## References

- Grande, S. (2015). *Red pedagogy: Native American social and political thought*. Rowman & Littlefield.
- Kovach, M. (2010). Conversational method in Indigenous research. *First Peoples Child & Family Review*, 14(1), 123-136.
- Landivar, L. C. (2013). Disparities in STEM employment by sex, race, and Hispanic origin. *Education Review*, 29(6), 911-922.
- Medin, D. L., & Bang, M. (2014). *Who's asking?: Native science, western science, and science education*. MIT Press.
- Smith, J. L., Cech, E., Metz, A., Huntoon, M., & Moyer, C. (2014). Giving back or giving up: Native American student experiences in science and engineering. *Cultural Diversity and Ethnic Minority Psychology*, 20(3), 413.
- Smith, L. T. (2013). *Decolonizing methodologies: Research and indigenous peoples*. Zed Books Ltd..
- Tuck, E., & Yang, K. W. (2014). R-words: Refusing research. *Humanizing research: Decolonizing qualitative inquiry with youth and communities*, 223-248.