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Growing Season: A talking circle evaluation of American Indian/Alaska Native student pathways to food systems and sovereignty higher education in Wyoming

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Abstract

Despite rich contributions to higher education and the need for new and more diverse strategies to improve the sustainability, productivity, and health impacts of our nation’s food and agriculture systems, American Indian/Alaska Native (AI/AN)

students only make up 0.7% of college enrollment and dropout rates continue to rise. While inherent resilience and key support systems such as family and peers are common among AI/AN students,

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they experience multiple barriers to success in higher education, including in the food, agriculture, nutrition, and health sciences (FANH) fields. We designed and implemented *Growing Season: Native student pathways to food system and sovereignty studies* (hereafter *Growing Season*) at the University of Wyoming to increase the number of AI/AN students in FANH studies through both recruitment and mentoring strategies. In the face of interrelated challenges that included the COVID-19 pandemic, dramatically reduced participation, and myriad institutional barriers, we pivoted our program evaluation strategy to a culturally appropriate talking circle approach grounded in an Indigenous research paradigm with co-investigators and staff including AI/AN and non-AI/AN participants ($N = 7$). We identified successes, challenges, and hopes through thematic analysis. Successes include themes of people, relationships, and belonging and cultural competence. Challenges include capacity and defining student success. Hopes include themes of communication and alignment. Increasing the number of AI/AN students in FANH is invaluable, not just for the graduates but for our society to tackle problems in food systems, agriculture, and health. However, supporting the people who provide programs to achieve those outcomes is paramount. These findings and our overall evaluation approach offer a culturally appropriate story of a program- and relationship-focused vs. outcome-focused approach for recruiting and mentoring AI/AN students at the University of Wyoming. These findings also point to recommendations for higher education institutions more broadly.

Keywords

American Indian/Alaska Native, Indigenous, college students, mentoring, food systems, food sovereignty, FANH, talking circle, Indigenous research paradigm

Introduction

American Indian/Alaska Native (AI/AN)¹ students bring a wealth of cultural experiences, values, and strengths to learning environments. However, AI/AN students only make up 0.7% of college student enrollment and have increasing dropout rates, despite AI/AN populations experiencing the highest growth rates nationwide (National Center for Education Statistics, 2023; Ramirez, 2021; Postsecondary National Policy Institute, 2025). While AI/AN students commonly draw on their inherent resilience and key support systems, such as family and peers, they experience multiple barriers to their success in higher education, including bias and systemic racism against their culture, traditions, language, spiritual practices, and heritage (Kelley et al., 2022; Lebron & Eva, 2021; Sparks, 2021; Turner et al., 2022). Often, institutions do not provide these students with pre-college academic preparation, on-campus social support, nor support for ultimately giving back to their tribal communities (Adelman et al., 2013). To ameliorate these challenges, successful higher education programs must collaborate with AI/AN educators and Elders to build recruitment and retention pipelines for AI/AN students to obtain expertise in their field while honoring and empowering their culture, traditions, and Indigenous knowledge (Riggs et al., 2007).

To address barriers to college enrollment, retention, and graduation of tribal students, the U.S. Department of Agriculture (USDA) initiated the New Beginnings for Tribal Students (NBTS) grant program for 1994, 1862, and 1890 land-grant universities.² The program provides funding to support tribal students through comprehensive strategies that include student recruitment efforts; financial assistance for tuition and related educational expenses; opportunities for experiential learning; and comprehensive student support ser-

¹ Native American is the term that we employed in our context at the University of Wyoming and Central Wyoming College in *Growing Season*. However, American Indian/Alaska Native (AI/AN) is often used to describe this demographic category, and our Native American and Indigenous co-authors prefer the use of it in the paper to distinguish the unique political relationship in the U.S. for tribal sovereign nations. We employ Native American and Indigenous in the paper when directly quoting others' terminology or describing specific programs.

² A land-grant college or university receives the benefits of the Morrill Acts of 1862 and 1890, or the Equity in Educational Land-Grant Status Act of 1994. Of these, 1862 institutions are typically state universities, 1890 institutions include historically Black serving institutions, and 1994 institutions include tribal colleges and universities.

vices such as tutoring, counseling, and academic advising. The grant program seeks to create a seamless educational pathway from secondary to postsecondary education, specifically designed to make land-grant colleges and universities more accessible and welcoming to tribal students (USDA National Institute of Food and Agriculture, 2025).

We pursued and received USDA NBTs funds to support *Growing Season*. In *Growing Season*, we aimed to implement and evaluate strategies for increasing the number of AI/AN students earning higher education degrees in food, agriculture, natural resources, and human sciences (FANH) disciplines at Central Wyoming College (CWC). CWC is a community college adjacent to the Wind River Indian Reservation (home of the Eastern Shoshone and Northern Arapaho Tribes) and four hours' drive from the University of Wyoming (UW, the state's only four-year university and the 1862 land-grant institution). Main strategies included:

1. Attract and retain more AI/AN students in FANH disciplines by creating mentorship groups at CWC and UW. These offered experiential learning, professional development, emotional and cultural support, and academic advising.
2. Recruit more AI/AN students to CWC and UW and, especially, to FANH disciplines by expanding UW's annual Native American Summer Institute (NASI) for AI/AN people, specifically those from the Wind River Indian Reservation. Expansion strategies included adding a FANH-focused study track week for high school students; creating a full-time FANH advanced NASI week for AI/AN people with high school or GED degrees; and hosting a two-day FANH workshop at CWC in advance of NASI.

More broadly, *Growing Season* centered around two greater aims for FANH study and practice in the U.S. First, we aimed to apply more diverse strategies, including from different paradigms such as Indigenous worldviews, to help improve the sustainability, productivity, and health impacts of our nation's food and agriculture systems. Second, we

aimed to increase the representation of AI/AN students practicing in FANH disciplines.

To evaluate our process and outcomes, we initially planned to track student enrollment and progress within NASI and mentorship groups and gather feedback from student, community, and faculty participants. This included monitoring and quantifying individual NASI and mentor group student trajectories and participation, numbers of students in majors and minors, surveys of students and faculty participants, and overall academic performance at CWC or UW. Additionally, we planned to support students who were interested in sharing first-person stories, as a culturally appropriate evaluation strategy, about their experiences in these programs and their plans and hopes in FANH and food systems and sovereignty work more broadly. Our "sovereign storytelling" approach—employed successfully in previous food sovereignty work in the Wind River Indian Reservation—aimed to support student participants to share their *Growing Season* experience via a story in whatever way was most meaningful to them, including but not limited to a talking circle, artwork, or digital story (Arthur et al., 2022; Budowle et al., 2019). This latter evaluation strategy aimed to embrace culturally appropriate Indigenous methodologies grounded in stories; however, other strategies were largely "objective" metrics typical in dominant research paradigms (see Wilson, 2009).

The first year of the project occurred at the onset of the COVID-19 pandemic in 2020. The pandemic affected educational environments at every level, including infrastructure for students, communication and support between teachers and students, and peer interactions in and outside of class (Stankovska et al., 2022). Beyond educational impacts, the pandemic created personal and economic hardships for participants and leaders engaged in this project, amplifying the existing disparities experienced by AI/AN students, faculty, and staff. Tribal communities and members were particularly hard hit by challenges such as the loss of Elders, difficulty with access to food access and healthcare, and food insecurity (Haskins et al., 2023; Sanchez et al., 2023). Multiple aspects of the project, particularly the ability to engage in personal connection through NASI and mentoring

groups and a loss of key personnel, dramatically influenced project strategies and outcomes—and our ability to evaluate them, which provides the main purpose for this paper.

Accordingly, we revised our initial evaluation plan and pivoted to a holistic internal process evaluation with key co-investigators and staff, including both AI/AN and non-AI/AN participants, via a culturally appropriate talking circle. This paper shares the results from that talking circle and recommendations for the future at both our own institutions and public higher education institutions more broadly—including around program evaluation methods themselves.

Background

First, we begin by briefly expanding on the literature that undergirds the overall *Growing Season* approach to provide a conceptual background for the program strategies we designed and implemented. This literature includes the underrepresentation and underserving of AI/AN students in higher education and science, math, engineering, and technology (STEM) and FANH fields along with previously identified strategies to address this challenge and better support these students. These concepts connect with needs for a diversity of paradigms and people to address global agricultural and food systems challenges. Additionally, we provide contextual background about *Growing Season* and the strategies that we were able to support despite the challenges that resulted in us shifting both our programming and our evaluation.

Our food and agricultural systems are more productive than ever; however, more than 820 million people globally do not have enough food (Willett et al., 2019). Despite the U.S. being one of the largest producers of food, 13.5% of households are food insecure, including more than one in six households with children (USDA, 2023). In addition, current food production methods are among the largest factors influencing climate change, biodiversity loss, freshwater use, disruptions to natural growth cycles, and changes to the land system. Since food systems are a major driver of poor health and disruption to the environment, to nourish all Americans now without compromising the health of future generations, more diverse and eco-

logically systemic approaches to science and practices in food and agriculture are needed (Willett et al., 2019). Traditional ecological knowledge (TEK) and Indigenous paradigms based on respect for Mother Earth, sustainable practices, and integrated systems thinking may be better suited to address these challenges than conventional science paradigms, which are more linear and reductive (Anderson, 2004; Kimmerer, 2002, 2013, 2016). TEK, including an emphasis on traditional plants and precolonization diets, has also shown benefits for health and well-being (Bersamin et al., 2008; Schulz, 1999). Additionally, diversifying human and health science education and research enterprises in the U.S. shows promise for improving health nationally and within AI/AN communities, specifically (Betancourt, et al. 2003; Córdova, 2016; National Research Council, 2011; Valantine & Collins, 2015;).

Despite these potential benefits, AI/AN people are the single most underserved (e.g., lower test scores in math, disparate representation in the school discipline system, limited college preparation courses, lack of strong mentorship) group in U.S. high school and higher education systems (Executive Office of the President, 2014; U.S. Census Bureau, 2024). Yet, there are nearly 600 federally recognized tribes in the U.S. (National Congress of American Indians, 2020). AI/AN and AI/AN mixed-race populations have experienced the highest rate of growth nationwide (Ramirez, 2021).

This disparity and ongoing barriers to retention are even greater in STEM fields, including FANH (Mosholder & Goslin, 2013; National Action Council on Minorities in Engineering, 2012). Research shows that school expense is the greatest barrier, with dropout rates directly tied to insufficient financial resources. However, lack of support in STEM programs from professors, advisors, and peers is also a substantial challenge to recruiting and retaining AI/AN students. Other barriers include students' perceptions regarding a lack of access and preparation, feeling like they are not smart or good enough, and having competing family responsibilities. Moreover, STEM majors who are AI/AN with stronger connections to specific aspects of their culture, such as communal

work goals, had less of a sense of belonging on campus than their white male peers (Turner et al., 2022).

Research has identified several effective strategies to address these barriers. Increased involvement with community members and connecting high school students with AI/AN professionals results in increased positive impact on students' career trajectories (Dreifuss et al., 2022). For example, preadmissions workshops for AI/AN students can foster awareness of the college admissions process and educational opportunities available for students. Such opportunities can better ensure student participation by covering the cost of travel, lodging, meals, handouts, and other materials (Ballejos et al., 2018; Bischoff et al., 2008; Kallison & Stader, 2012). Programs embedded with aspects of AI/AN identities and cultures, drawing on community-based strengths, help students to cultivate self-efficacy and pride for their higher education experience while maintaining pride in their culture (Ballejos et al., 2018; Keene, 2016). Recruitment initiatives benefit from including narratives from Indigenous graduate students who share about how their tribal communities and values influenced them on their higher education journeys (Waterman, 2019).

Similarly, programs can support retention after admission by assigning peer mentors and supporting networking, encouraging office hours attendance, and providing academic counseling (Cruz et al., 2021; Hurtado et al., 2009; Sánchez et al., 2016). The top recommendations to promote retention in higher education identified by AI/AN students include not only financial security and funding but mentorship and academic preparation support that integrates family, community, and work experience into the academic experience (Akee et al., 2020; Gervais et al., 2017). Additionally, recruiting AI/AN faculty who are rooted in community and cultural values and curricula that incorporate Indigenous perspectives can lead to a more inclusive learning environment and support students to benefit their tribal communities (Gervais et al., 2017; Oxendine et al., 2020).

For example, the Howard Hughes Medical Institute (HHMI) Professors Program at Louisiana State University incorporates a mentoring model

that addresses many of the key barriers identified for student retention in STEM disciplines such as academic rigor, lack of connection or peer support, hands-on experiences, and finances. The HHMI Professors Program provides undergraduate students with “academic interventions, mentoring, research experiences, and financial support” (Wilson et al., 2012, p. 149) to improve student performance and retention, especially among underrepresented students. Also, the Hope, Enrichment, and Learning Transform Health in New Mexico (HEALTH NM) program includes initiatives in health professions from middle school through high school and college as well as graduate education (National Academies of Sciences, Engineering, and Medicine, 2016). In sum, peer and community interactions and social support provide AI/AN students with a sense of belonging in higher education that is key to their success (Oxendine et al., 2020; Strayhorn, 2011).

We shaped *Growing Season* intentionally around the successful strategies highlighted in the literature above, especially (1) pre-admissions programs (NASI) for high school students that aid in recruitment and (2) mentoring programs that aid in retention. For both, we embraced calls for cultural and material support by including Elders, AI/AN faculty, and peers and complementary strategies that exceeded the two main *Growing Season* focal areas.

Generally, tribal representation in *Growing Season* programs included Eastern Shoshone and Northern Arapaho participants from the Wind River Indian Reservation (WRIR) and enrolled Navajo, Oglala Sioux, Blackfeet, Seminole, and Standing Rock Sioux. *Growing Season* activities occurred on both the UW campus and CWC campus as well as locations across the WRIR during each of the four years of the project. FANH sessions included a broad focus on these topics and included discussions and hands-on workshops with AI/AN Elders and practicing professionals, educational events focused on TEK, stories from AI/AN students, promotion of local and ancestral foods through workshops in the WRIR and with the Wind River Tribal Buffalo Initiative, and professional development.

Activities and mentoring sessions at UW occurred at the Native American Education,

Research, and Cultural Center (NAERCC). UW opened the NAERCC in 2017. NAERCC organizes and hosts NASI at UW. UW's first NASI was held in June 2017 and has hosted about 40 students every summer since. The co-principal investigators (PIs) on this project—Keith and Spoonhunter—collaborated with the UW president's planning team to include a health track within that institute. Each summer since then (2018–2024), they and co-investigators Porter and Arthur have offered a health-focused NASI track and/or academic sessions. NASI focused on helping students imagine themselves as belonging at UW.

Growing Season activities at UW occurred each month during the academic year and during the pre-NASI week in June. Typical attendance included 8–10 students per session, with more participants in the community events. Activities at CWC occurred each month during the academic year, utilizing meeting locations in the Inter-Tribal Education Center on campus and two locations in the WRIR. In total, more than 50 AI/AN students participated in *Growing Season* in some way from 2020 through 2023. Table 1 details the programming we provided, despite the challenges that we encountered.

Table 1. *Growing Season* Programs and Complementary Strategies Supporting American Indian/Alaska Native (AI/AN) Students at the University of Wyoming

Program	Timing	Food, Agriculture, Natural Resources, and Human Sciences (FANH) activities	Target audience
NASI at the University of Wyoming (UW)	1 week each summer (June)	<ul style="list-style-type: none"> • Academic sessions such as: <ul style="list-style-type: none"> ○ Food sovereignty ○ Sustainable food systems ○ Human nutrition and food ○ Digital storytelling • Overview of FANH-related majors of study at UW • Academic sessions led by AI/AN and non-AI/AN faculty, staff, leaders 	AI/AN high school students
Advanced Track at NASI at UW	1–3 days each summer; complementary to NASI (June)	<ul style="list-style-type: none"> • Experiential learning workshops in: <ul style="list-style-type: none"> ○ Food sovereignty ○ Sustainable food systems ○ Human nutrition and food ○ Digital storytelling • Overview of FANH-related majors of study at UW and Central Wyoming College (CWC) • Academic sessions led by AI/AN and non-AI/AN faculty, staff, leaders 	AI/AN people with high school or GED degrees
Workshops in the Wind River Indian Reservation	1–3 days each summer; complementary to the Advanced Track at NASI (June)	<ul style="list-style-type: none"> • Wind River intertribal event with the Greater Yellowstone Coalition recognizing the 150th anniversary of Yellowstone National Park (full event focus on the role of tribal nations and use of park lands by more than 30 tribes for food and medicine) • Ancestral lands and cultural history (Arapaho Ranch, Bull Lake, CWC Alpine Science Institute) • Indigenous plants and foods (Restoring Shoshone Ancestral Foods, Wind River Tribal Buffalo Initiative) • Biodiversity (Community Science event at Wind River Tribal Buffalo Initiative) • Workshops primarily led by AI/AN faculty, staff, leaders, community members 	Tribal Elders, community members, UW/CWC students and faculty

continued

Table 1, continued

Complementary Strategy: Academic coursework	Academic year	Developed a 3-credit undergraduate course, “Native American Food Sovereignty and Health” in the Community and Public Health Certificate Program	Students at CWC/UW
Complementary Strategy: Increasing cultural awareness, humility, and competence in supporting AI/AN students	Academic year and summer programs	<ul style="list-style-type: none"> • NASI academic session leaders • Advanced Track at NASI workshop leaders • Mentoring events at NAERCC • Participation in workshops in the Wind River Indian Reservation 	Non-AI/AN faculty, staff, and students at CWC/UW

Methods

The authorship team here are key personnel in the *Growing Season* project, all of whom participated in our holistic evaluation in some way (as participants and/or facilitators). We note that our team includes AI/AN and non-AI/AN members, many of whom have long collaborated to support AI/AN students in FANH at UW and CWC. Co-authors Spoonhunter and Curry and another two participants are AI/AN and enrolled tribal members. Co-authors Keith, Budowle, and Porter are white female researchers who had been engaged with tribal community partners and Indigenous research methodologies, including in partnership with the AI/AN participants, for at least 10 years. Spoonhunter, Keith, and Porter supported students in a health-specific NASI track since 2017. Budowle has experience with the talking circle methodology that we employed and previously co-developed (with Melvin Arthur) the initial sovereign storytelling evaluation approach we planned to use (Budowle et al., 2019).

Talking Circle Methodology

In the absence of our initially planned *Growing Season* evaluation methodology due to dramatically reduced student and faculty participation rates stemming from the COVID-19 pandemic, we pivoted, as noted above, to a more holistic evaluation with the core *Growing Season* team. Overall, we followed threads emerging in our internal project team meetings to frame this evaluation. Namely, team members shared that supporting AI/AN student mentoring and recruitment—and *Growing Season*, specifically—is a challenge due to institutional barriers at UW and CWC and greater sys-

temic barriers, which were only heightened by the pandemic. Instead, we used our holistic internal evaluation to ask, broadly: what does/would it take to do this work of mentoring and supporting AI/AN students in food systems and sovereignty studies?

To explore this question and these challenges, we employed a talking circle methodology. Project team members regularly employ this approach when engaging with tribal community partners and during student activities in the NAERCC (e.g., Budowle et al., 2019). Talking circles are a type of culturally responsive focus group—a dynamic, facilitated group conversation about a defined topic that also embraces cultural identities, practices, and contexts (Rodriguez et al., 2011). As an Indigenous practice, they provide a setting for shared healing, problem-solving, and decision-making, where each person has a voice and opportunity for others to hear them (Greenwood, 2005; McIntosh & Eschiti, 2009; Pember, 2011; Wilson, 2008). Talking circles explicitly rely on “relational accountability” (Wilson, 2008, p. 39) as their approach to reliability, and, therefore, are fitting in an Indigenous research paradigm. An Indigenous research paradigm, which informs our methodology, differs from dominant (i.e., western, white, and typical academic) paradigms, including in its embrace of subjectivity, emotions, and relationality alongside empirical evidence. Deep listening on the part of participants, researchers, and, ultimately, audience are key (Wilson, 2008).

We conducted this talking circle via Zoom in February 2023 to accommodate participants’ various life changes in terms of health and location since the launch of our project. While the session

occurred online, we otherwise drew on relevant customs and practices employed in similar studies in the WRIR (see, for example, Budowle et al., 2019). Specifically, we framed the process by showing a picture of a talking stick made by a co-investigator's mother and previously blessed by an Elder. Participants would have the floor when "holding" the virtual talking stick, aiming to keep initial responses to approximately five minutes before "passing" the virtual stick for someone to offer something new to the circle and/or build on another participant's contribution.

The co-authors of the present study and two other *Growing Season* personnel participated. Curry was unable to attend but met separately with Keith to discuss the same topics. In total, this included six participants and the facilitator ($N = 7$). Participants completed informed consent forms prior to participation as part of the *Growing Season* institutional review board protocol previously approved by the University of Wyoming. Budowle facilitated the talking circle in her *Growing Season* evaluation role. In addition to the broad question and process framing described above, three prompts guided the two-hour talking circle:

- What has gone well with *Growing Season* so far?
- What has been challenging with *Growing Season* so far?
- What are your hopes and dreams for AI/AN FANH student mentoring beyond *Growing Season*?

We recorded the talking circle with participants' permission and generated a verbatim transcript, which a student research assistant reviewed and corrected for accuracy and clarity. In keeping with Indigenous methodologies—which honor whole stories and emphasize relationships between each other and broader truths (Barton, 2004; Wilson, 2008)—we avoided a highly formal coding process, instead maintaining the talking circle as a holistic evaluation of *Growing Season*. Broadly, however, we applied other key aspects of a thematic analysis approach to help present our data for readers below, including immersing ourselves in our talking circle data and identifying, reviewing, and

describing emergent themes, including coalescing exemplative quotes shared by talking circle participants to support and explain those themes (Nowell et al., 2017). The first author, Keith, led this thematic analysis by listening to the recording and reviewing the corrected transcript; the second author, Budowle, secondarily supported and augmented Keith's main analysis by reviewing those same materials and further revising themes.

Results

We organize emergent themes according to our three prompts: successes, challenges, and hopes. We briefly describe each theme and present talking circle participants' quotes, lightly edited for grammar and clarity, to augment and explain those themes.

Successes

Successes include themes of people, relationships, and belonging and cultural competence.

People

Particular people, including the core project team, other faculty, and staff supporting AI/AN students, particularly in the UW NAERCC, were an integral component of project success and supporting AI/AN students generally. The talking circle discussion emphasized the core team's persistence, commitment, and support for each other and leveraged years of work prior to the project. Moreover, students benefit from seeing the core team's persistence. Participants specifically described this in the following ways:

It's not the programs, it's not that it's *Growing Season*, or that [specific] money, it's the people.

The core team and how we consistently show up for each other, whether that's formal [like meetings] or not, we're here, we come to the table to talk about things. The persistence in being here for each other but also the students.

There's mentoring for students, but mentoring each other and how we do this work in a good way has always been really important for me personally, as well.

The persistence ... it's something that's always been there for students, and that's something that they will notice.

Relationships

Beyond the people and connections within the team, relationships with students, other UW faculty, and community partners from the WRIR were a key success. *Growing Season* helped to support those relationships through mentoring sessions, NASI, and other experiential learning and events both on and off campus. For example, one participant described how faculty across the campus who are not engaged primarily in mentoring AI/AN students are beginning to reach out to seek support for a student following participation in NASI. The talking circle discussed how building authentic relationships and partnerships in a good way, perhaps restoring broken trust between the university and the community, could begin to emerge from some of the seeds planted before and during *Growing Season*. For example, participants stated:

Community members, if they feel like they can contribute, they reach out to us now. They've been really supportive of whatever work it is, whether it's at CWC, on the reservation, or just trying to help build support and opportunities for our students.

People on the reservation, community members and leaders, come to know that we're here, and they'll reach out. I think that is the most important thing achieved.

People [in the WRIR] are starting to recognize UW people; that's important, especially in rebuilding a trusting relationship with the tribe[s].

[Relationships] are such an amazing part of this work; and not just the amazing part but the essential part.

Belonging and Cultural Competence

Creating a sense of belonging through specific, culturally relevant experiences for potential and current students allowed them to realize the breadth

of opportunities and their potential in FANH fields and higher education more broadly. These experiences included on-campus sessions (such as NASI and a related food sovereignty workshop) and engagement with partners on the WRIR. Workshops and events highlighted tribal programs, TEK, community-based participatory research, food sovereignty efforts, and cultural preservation. Some current students and all participating faculty involved in these experiences were non-AI/AN (although the leading faculty were AI/AN), which extended a broader sense of building cultural competence around students' need for belonging to a larger audience. The events demonstrated cultural importance and value, building knowledge and insight among non-AI/AN academic partners who attended, and engaged with community members. Increased knowledge and relationships with tribal partners among academics on campus strengthened collaboration and support for AI/AN students in classrooms, labs, and at the NAERCC. Participants shared the following exemplary quotes:

It was because of going to these meetings, or going to the Summer Institute, that got her to be a student.

Create that pathway to the reservation, the educational pathway, so that not only can UW feel comfortable coming to the reservation, but then our students can also feel comfortable coming to UW as well.

It's really helpful to people who want to come to school but maybe feel like they don't fit in—it's just a trial. So, that one week makes people really want to change their lives and get them in to school.

It was a really awesome experience to be able to share the work of community partners so that students can see what community partners are doing.

These workshops, you pull people together from the community and from campus; some trainings for faculty about how to be better professors for Native students.

Challenges

Challenges include capacity and defining student success.

Capacity

Ongoing challenges for the team included the loss of personnel in the NAERCC and key team members transitioning to new roles away from UW. Additionally, team members are engaged in many other activities in their academic roles. Supporting connections and relationships with tribal partners, potential students, and even each other takes time and intention. Often, this challenge manifested as lack of communication or miscommunication. The lack of institutionally provided resources, including streamlined processes and sufficient budgets, led to challenged relationships among the team, as *Growing Season* presented an extra task to coordinate (despite the funding that came with it). Team members worked actively, as noted in success themes above, to maintain relationships and programs despite capacity gaps. *Growing Season* additions to NASI proved easier to implement than new mentoring programs, as they integrated into an already established program with some amount of institutionally provided support. However, lack of human capacity necessarily presented a challenge to project success in general. Many of these longstanding capacity issues only deepened amid the pandemic, during which students' time and wellbeing were challenged, as well. Participants said:

I don't think it worked to add a whole other program of mentoring at UW. It was really tough with [some partners] to do one more thing.

And whether this particular model of mentoring groups worked well at UW? I would say it kind of didn't for various reasons. ... NASI, of course, is amazing, right? But the mentoring group, it's this whole extra programming.

We have these three programs in the house, with different histories. Everything was not really integrating very well; we're almost competing rather than synergizing

[Team members] are basically trying to survive, basically trying to help the students survive. So sometimes a new program can be a lot. Just adding something more without additional support for faculty, staff, and students can be really challenging. People are spread really thin.

We're dividing our time. We're almost competing rather than synergizing. And then, especially, the students, they can't go to another meeting, right? It's like we're asking to do one more thing.

Time and capacity are the most significant barriers. And with that barrier, it also makes us maybe seem inaccessible to people, like we're not doing it. Like the impression is that we're not doing it, or we don't want to do it.

I think one of our biggest challenges was just the appalling amount of time it took to get the subaward set up and to get the money actually into supporting activities happening at CWC. I also think there is some rigidity to USDA funding that can make things be slower. ... Getting them going into the system, some of those processes, not just federal grant processes. But also, just administration slowness. I think it really doesn't help students when they're at a point where they need something, right? They have their need; they need food, or they need this when they need this, and some of those processes that come with slow grant funding. You know, that kind of stuff, can be a barrier.

Defining Success

In higher education, success is defined and measured by student numbers (including enrollment and graduation). However, many team members who have worked for years supporting AI/AN students define success differently. For example, the success of one student who enrolled at CWC, transferred to UW, graduated, gained employment with a tribal organization, and continued on to graduate school at UW is a clear success celebrated by the team and the community. Another student, who visited the WRIR for experiential learning with this project,

gained a relationship with a tribal partner and moved to the reservation and began his dream job after graduating. These two students would scarcely move the needle on student enrollment in FANH but demonstrate a deep connection and contribution to tribal partnership and initiatives. Other student success stories reflect meeting basic needs such as food, housing, and connection to family. Many aspects of mentoring and support focused on connecting students with these resources to meet basic needs, which were particularly challenging during the pandemic with the loss of tribal Elders, community members, and increase in food insecurity. Different perspectives on success and different methods of evaluation are essential. Direct quotes include:

It's really hard to get our students to that next thing of thinking about just themselves; a lot of our students are struggling with food security, classes; rather than keep asking these students to be at different meetings, we can align some of our meetings with Keepers of the Fire [student org] and offer food; if you feed them, they will come.

I'm worried too that our numbers aren't where we're supposed to be. But I feel if we're looking at different things, we can take students to show where [the project] is relevant in their community.

The formal evaluation things that are part of a grant do not always match what are the success stories and the great work that is happening with supporting Native students. Numbers just don't show enough of the picture.

I also know that the sovereign storytelling we tried to include in the evaluation of this is an amazing thing that could address some of that, but it still gets back to time and capacity. Like, do we have the time or capacity to actually do that process of sovereign storytelling with the students or the ones that want to, you know? I think that the formal evaluation piece is a barrier ... I'm so appreciative of this time and this talking circle, because I think this is a strategy

and a solution for how we address the problems that come with formal evaluation.

Hopes

Despite challenges, themes emerged reflecting hope for the future related to communication and alignment.

Communication

This theme includes better communication from project leaders about projects and related successes and opportunities with campus partners (e.g., seminars, guest lectures, press releases, policy briefs), community partners (e.g., workshops, newsletters, events), and the broader educational and tribal communities working with AI/AN students (e.g., published manuscripts, conference presentations). Improving the visibility of programs is especially important for community partners, in terms of sharing with them the opportunities available to current and potential AI/AN students and providing a pathway for tribal partners to share their own good work and opportunities. On the UW campus, an increase in visibility could contribute to better coordination with other faculty and grant-funded projects that support tribal initiatives, increased connections with non-AI/AN students and faculty supporting AI/AN students, and building understanding of the complexity of this work and time and effort required to do it in a good way. For example:

More well-rounded communication so everybody knows what's up—when people are traveling to the reservation, and when UW people might be presenting or having meetings on the reservation. I'm part of that too, right? When I go, it's not necessarily that I'm putting it in a calendar somewhere so that everybody knows when I'm meeting with community partners. I think that having that kind of database or communication strategy would be helpful.

And that's the other thing about Natives, is we like to share. So, we don't just keep anything for ourselves. And I want to create that pathway to the reservation, to here, the educational pathway, so that UW can feel comfortable

coming to the reservation, but then our students can also feel comfortable coming here as well. I want to have that comfort for both ways and both ends.

How could we communicate better with each other, but also with the students, and the Center, and the wider UW campus, and CWC, and the community?

I can see it being really helpful to be consistently using the same language to try to talk about supporting pathways for Native students.

We could bring everybody together and try and get everybody on the same page as far as health on the reservation and education. And then also creating a newsletter that would come out each season.

Alignment

Another key hope is to synergize our efforts, thereby better managing internal conflict and competition given our limited capacity and resources. Thoroughly integrating all offerings within the NAERCC and under an advisory board showed promise for fostering collaboration while streamlining and reducing confusion. This would require consistent and ongoing dialogue around efforts related to the project and AI/AN student support more broadly. It would also require institutional support for AI/AN students, staff, and faculty.

Rather than asking these students to be at different meetings, if we can align some of our meetings with Keepers of the Fire and say, “Hey, can we have 15–20 minutes for an activity?”

The breakdown in communication; hurtful feelings on both sides; how do we then try to think about how to do better? I am very much wanting everybody to feel looped in, and their contributions are being honored, and no one’s trying to do things outside of or in competition.

Why don’t we just partner and collaborate with what the Native Center is doing rather than being two separate things?

I think having *Growing Season* centralized here is important, and it’s a good step to really show that we’re collaborators and not hoarders of information. Which sometimes Western thinking is, whereas us as Native people, we know that we have to share what we learn in order for the next generation to be able to go, and so on.

We’re all pulled in different directions, but knowing that there’s kind of a Center, that we can depend on. We have a Native American advisory board that once we kind of figure out the roles ... we’ll hopefully pull in other programs across campus to be a part of this.

And support at all levels, I think, also communicates the importance of having Native students here, having Native faculty here.

Discussion

The team’s efforts to support AI/AN students are strong and continue to impact them and the tribal community. We want to continue to build on our successes and enhance them through continued collaboration. Broadly, we discussed building on successful initiatives including but not limited to *Growing Season*, particularly those that allowed students to engage with leaders in agriculture and food sovereignty initiatives within the WRIR and sharing culturally appropriate meals with each other.

The *Growing Season* program served participants from the WRIR nations (Eastern Shoshone and Northern Arapaho), as well as enrolled Navajo, Oglala Sioux, Blackfeet, Seminole, and Standing Rock Sioux. Our programs provided targeted support for students, attempting to narrow the substantial gap in AI/AN students in higher education (Executive Office of the President, 2014; U.S. Census Bureau, 2024). Program offerings included a broad focus on FANH such as engagement with AI/AN Elders and practicing professionals, incorporation of TEK, connection with current and for-

mer AI/AN students to share their successes and challenges, connection with cultural practices supporting local and ancestral foods through workshops in the WRIR and with the Wind River Tribal Buffalo Initiative, and professional development. Program activities supported basic needs for our students as almost all our activities included meals.

A key strength of our program was the core project team of people supporting AI/AN students at UW. Our persistence, commitment, and support for the team and the work was a consistent theme throughout our talking circle. While we did not identify literature demonstrating the importance of people, relationships, and supporting internal project teams as critical for AI/AN student success, our team clearly identified this as a success that supports AI/AN students. Such relationality, however, is central to an Indigenous research paradigm (Wilson, 2008). Similarly, relationships were central to providing *Growing Season* programming itself—built on collaborations supporting AI/AN students between the partners, community members, and programs that spanned more than a decade. A hope for the future was to nurture and support those relationships through improved communication, increased visibility, and the addressing of conflict. The importance of our relationships and collaboration with tribal partners, including Elders, for AI/AN student success is consistent with other successful programs supporting AI/AN student pathways to higher education. AI/AN success is positively influenced by involving community members, obtaining expertise in the field, and honoring and empowering culture, traditions, and Indigenous knowledge (Dreifuss et al., 2022; Riggs et al., 2007).

Our work to support a sense of belonging by offering culturally relevant experiences was another key strength of the project. *Growing Season* activities such as NASI, workshops, and trips to the WRIR to engage with community partners offered a variety of opportunities to build knowledge and support for culturally rich experiences that honor students' cultural identity. A strength was connecting and supporting existing programs that serve AI/AN students such as NASI and offering workshops that connect students with UW and CWC. These program offerings covered all expenses such

as travel, meals, and housing for students. This connected AI/AN students with programs such as admissions and with specific faculty to hear about educational opportunities, consistent with other literature showing positive impacts on higher education retention through covering costs to engage with college resources (Ballejos et al., 2018). Our programs were embedded with aspects of AI/AN culture, building on community-based strengths and AI/AN identities and cultures, a demonstrated method to promote successful college application among AI/AN students (Keene, 2016). Additionally, the *Growing Season* programs providing culturally relevant experiences and connections with community partners on the WRIR are demonstrated methods to support AI/AN students in higher education (Ballejos et al., 2018; Dreifuss et al., 2022; Keene, 2016).

Other strengths of *Growing Season* programs were mentoring networks and a strong team of both AI/AN and non-AI/AN members to support AI/AN student success and increase a sense of belonging. Mentoring has been shown as a positive influence on AI/AN student persistence in higher education (Akee et al., 2020; Cruz et al., 2021; Gervais et al., 2017; Sánchez et al., 2016). Our team and *Growing Season* activities included AI/AN alumni of both CWC and UW, offering opportunities for potential and current students to hear about how students have supported and maintained connections to their communities. Our team included AI/AN faculty and our programs highlighted tribal community leaders working in FANH areas, connecting with strategies shown to be effective with AI/AN students (Gervais et al., 2017; Oxendine et al., 2020). Evident in our discussion of the strengths of our programs was the inclusion of current students and graduates of UW and CWC programs. Team members were current or former students. We also included AI/AN students in workshops and academic sessions showing how their family and tribal connections have supported their college experience. This method of recruiting and supporting AI/AN students has been shown to benefit recruitment initiatives (Waterman, 2019). Our programs included peer mentoring, advising, accessibility to students, and building relationships, which are other key methods to improve the

enrollment and retention of AI/AN students (Cruz et al., 2021; Sánchez et al., 2016).

While it was a strength that our institutions currently offer programming for AI/AN students, a challenge was to weave them together in a way that was synergistic and supportive. In many ways, our programming felt like additional work that affected current capacity. An important talking circle theme was the direct identification of team capacity and the challenge that posed to program effectiveness. We were persistent, but our approach could have been more effective for AI/AN student support if program offerings were cohesive.

The challenge of defining what student success means relates to project goals that address student numbers. To increase or expand the definition of student success, we note the need to connect *Growing Season* and related efforts with institutional priorities. The *Growing Season* project addressed multiple CWC and UW priorities, including those identified in the CWC 2017–2021 Strategic Plan, the UW 2017–2022 Strategic Plan, and the UW Native American Affairs Advisory Council’s mission. Those plans include support for the integration of knowledge, traditions, and values of AI/AN people and to utilize university resources to maximize the positive impacts of outreach programs with AI/AN and other Indigenous peoples throughout the state, region, nation, and world. Our team felt that recognizing the success of one student was meaningful, for our work and tribal needs, and clearly aligned with institutional priorities.

Key takeaways for building on the success of *Growing Season* included an increased focus on communication. Specifically, this requires supporting the persistent and committed team working to support AI/AN students by ensuring consistent and ongoing communication. In-person engagement through meetings is important, as well as ongoing electronic and phone communication. Engaging throughout conflict is important for addressing issues and supporting the team. Ensuring consistent and supportive communication enhances relationships at all levels—for our students, community partners, campus collaborators, and each other.

Another key takeaway and hope for the future of our work together was alignment. An important strategy for our team is to align *Growing Season* activities and programming with existing programs to decrease the burdens related to capacity for the team and for AI/AN students. Our hope is to coordinate activities, not be in competition for time, space, and student participation.

Clearly, our evaluation approach and *Growing Season* itself drastically changed due to the COVID-19 pandemic and limited how and what we had initially planned to report. The primary limitations of our talking circle include the small sample size of participants, amount of data generated through a single session and related conversation, and the focus on internal processes at UW. Within a dominant research paradigm, this may limit the generalizability of our findings to other higher education institutions. However, within an Indigenous research paradigm, the emphasis on relational accountability (Wilson, 2008) helps to bring the story of *Growing Season*—and particularly what our faculty and staff who support AI/AN students face within the institution—to life.

In some ways, this shift in evaluation actually provided an opportunity; as one participant stated, “this is really rich conversation that I think gets at these things that we wouldn’t otherwise be able to; the story we wouldn’t be able to tell in terms of *Growing Season* evaluation.” Although the COVID-19 pandemic changed our rates of participation and shifted our evaluation from more “objective” measures, we find our talking circle evaluation to be a blessing in disguise. While a single talking circle holistic evaluation may not be considered systematic or objective within a dominant research paradigm, both our method and our results, which focus on relationships and relationality, are exceedingly relevant within an Indigenous research paradigm. We argue that perhaps no other approach or finding—blending epistemology and methodology with ontology and axiology (Wilson, 2008)—could be more fitting for evaluating a program focused on supporting AI/AN students and the faculty and staff alongside them in higher education.


Additionally, the talking circle revealed that the pandemic only laid bare and made more evident the existing, long-term, and ongoing dramatic gaps

in institutional support for AI/AN students and providing sustainable programming. If UW and similar universities wish to support AI/AN students, as was the aim of our funding source and is imperative to address our pressing food systems challenges (Anderson, 2004; Kimmerer, 2002, 2013, 2016; Willett et al., 2019), deep and long-term investment in AI/AN students, faculty, staff, community partners, and programs is required. In this vein, one institutional capacity recommendation emerged from the talking circle that did not neatly fit into our main themes, but we find particularly important to mention here: provide free tuition to all AI/AN support students, as other institutions serving higher numbers of AI/AN students have done (e.g., Montana State University, n.d.; University of Arizona, n.d.; University of California, n.d.). This transformative measure would alleviate some of the basic needs and capacity challenges affecting these students. It would also alleviate the need for faculty and staff to focus their programming so heavily on these basic needs, attending to helping students survive, thereby increasing their capacity to support students' culturally relevant FANH programming.

Conclusion

Above, we have described key aspects of the *Growing Season* program that we hope other higher education institutions may replicate or adapt. While our internal holistic evaluation may lack broad "generalizability" to all higher education institutions, we find it to be based deeply in relational accountability in ways that make it relevant within an Indigenous research paradigm and, we expect, for supporting AI/AN students in other contexts. Accordingly, we share the following insights for others engaged in AI/AN student mentoring and recruiting programs at other universities:

1. Relationships between project leaders, team members, and students are key. Nurture them through good communication to help support both the project's goals and AI/AN students' feelings of belonging.
2. Relationships between project team members at the higher education institution and tribal community members are also key. Communication, support, and inclusion are important for supporting AI/AN students and pathways to FANH.
3. Planning well so that activities complement other work to support AI/AN students is important to avoid conflict, overscheduling students and team members, and time restrictions for including community voices.
4. Flexibility with how to define program and student success, and being able to communicate that with campus leaders, tribal leadership, community members, and the broader academic community, are essential.

Increasing the number of AI/AN students in FANH disciplines is invaluable, not just for the graduates but for our society to be able to tackle wicked problems in food systems, agriculture, and health. Even if we achieved a fraction of our enrollment goal, it would be a major shift toward achieving the ultimate goal of having our student body composition represent the residents in our state. By identifying strengths, challenges, and hopes for the future, we hope both the substance and approach to our evaluation can help inform this ongoing work at our own institutions and others, as they work to better support AI/AN students as FANH and food sovereignty leaders. 

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