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Rachelle Vettern

*North Dakota State University*

Lynette Flage

*North Dakota State University*

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## Assessing Results of 4-H Mentoring with Native American First-Generation 4-H Youths

### Abstract

To reach first-generation Extension families and combat barriers faced by Native American youths, North Dakota State University Extension has been involved in the national mentoring program 4-H Youth and Families with Promise (YFP). In the program's fourth year, we conducted ripple effect mapping to explore changes in the schools and communities where YFP was being implemented. Our findings indicate that as a result of relationships with mentors, youths gained positive life skills and critical workforce expertise that will assist them in attaining their education goals and securing career opportunities. Implications for Extension programming include the recommendation to conduct programs featuring opportunities for youth entrepreneurship and community involvement that reflect a community's culture.

**Keywords:** [4-H Native American youth mentoring](#), [youth entrepreneurship](#), [youth ripple effect mapping](#), [first-generation Extension families](#), [community capitals framework](#)

**Rachelle Vetterm**  
Associate Professor  
Center for 4-H Youth  
Development  
[rachelle.vetterm@ndsu.edu](mailto:rachelle.vetterm@ndsu.edu)  
[@RachelleVetterm](#)

**Lynette Flage**  
Director and  
Community Vitality  
Specialist  
Center for Community  
Vitality  
[lynette.flage@ndsu.edu](mailto:lynette.flage@ndsu.edu)  
[u](#)

North Dakota State  
University Extension  
Fargo, North Dakota

## Introduction

The nationwide focus of reaching families new to Extension programming, or first-generation Extension families, is being realized with Native American youths and families in Sioux County, North Dakota. Native American youths on the Standing Rock Reservation in Sioux County face many challenges. More than half of children aged 0–17 residing on the reservation are living in poverty (North Dakota Kids Count, 2013). Due to this poverty, many educational and developmental opportunities are not available or affordable. Being raised in poverty places children at higher risk for a wide range of issues, including social and emotional stress, physical and mental health issues, poor cognitive and academic outcomes, and higher rates of risky behavior. Indeed, Sioux County has the highest average high school dropout rate in North Dakota, at 12.2% (North Dakota Kids Count, 2013).

In an attempt to combat some of the difficulties faced by youths and families on the Standing Rock Reservation, North Dakota State University Extension 4-H Youth Development has been involved in the national mentoring program 4-H Youth and Families with Promise (YFP) since 2012. YFP is an evidenced-based program designed to strengthen academic performance, social skills, and family bonds through the use of activities related to leadership, community service, and group project work (Riggs, Lee, Marshall, Serfustini, & Bunnell, 2006). The

overall goal of the program is to use mentor support to help reduce juvenile delinquency.

When the Standing Rock Reservation YFP project was in its fourth year of grant funding, we conducted an evaluation to explore its effects. At the time of the evaluation, participating youths were partnered with adult and older peer mentors around various projects and family-night-out group activities that foster family bonds through experiential learning. Youths aged 8–18 met with mentors on a weekly basis and participated in afterschool 4-H programming led by these mentors and Extension professionals. Specific projects included educational video making, business development, entrepreneurship, 3-D printing, beadwork, leather craft, outdoor skills development, service learning, literacy activities, and 4-H club participation. Older youths had started a screen printing and embroidery business called Sioux Image with adult and peer mentors. Family-night-out events were held monthly. These events included family portraits, holiday visits with Santa, holiday gift making, storytelling to capture family histories, 4-H project education, recreation, and leadership activities.

In our study, we explored overall changes that had taken place in the schools and communities where YFP was provided. We captured these changes through the ripple effect mapping (REM) process (Chazdon, Emery, Hansen, Higgins, & Sero, 2017; Kollock, Flage, Chazdon, Paine, & Higgins, 2012). Herein, we provide a detailed description of the approach we used, report our findings, and suggest implications for Extension programming intended to reach new youth and family audiences, connect youth programming to the greater community, and offer hope through community asset building.

## Overview of Youth Mentoring Literature

Mentoring is a well-known practice in positive youth development with many youth populations (Friesen et al., 2015; Karcher, Davidson, Rhodes, & Herrera, 2010; Lerner, Almerigi, Theokas, & Lerner, 2005; Norton & Watt, 2014; Scales, Benson, & Roehlkepartain, 2011), but according to Aschenbrener and Johnson (2017), “research on mentoring programs with Native American youths is severely lacking to non-existent” (p. 14). The components of mentoring success include creating a reciprocal relationship of trust between the mentor and mentee, clearly defining roles and responsibilities, establishing short- and long-term goals, using open and supportive communication, and collaboratively solving problems (Aschenbrener & Johnson, 2017; Byington, 2010; Lee & Quijada Cerecer, 2010; Weiler, Zimmerman, Haddock, & Krafchick, 2014). Over the years, youth mentoring programs have evolved to incorporate these components and to reflect both the needs of youths and mentors in communities and the research that supports positive, effective mentoring practices.

In 2011, DuBois, Portillo, Rhodes, Silverthorn, and Valentine assessed the effectiveness of mentoring programs for youths and made the following determination:

Overall findings support the effectiveness of mentoring for improving outcomes across behavioral, social, emotional, and academic domains of young people’s development. The most common pattern of benefits is for mentored youth to exhibit positive gains on outcome measures while non-mentored youth exhibit declines. It appears then that mentoring as an intervention strategy has the capacity to serve both promotion and prevention aims. (p. 57)

When looking at program structure, Dubois et al. (2011) discovered that youths at all developmental stages benefited from mentoring and that the mentors did not have to be adults. Programs that engaged older peers showed comparable levels of effectiveness (Dubois et al., 2011). These findings demonstrate the “flexibility and broad applicability of mentoring as an approach for supporting positive youth development” (Dubois et al., 2011, p. 57).

Using the “post-then-pre” method, Riggs et al. (2006) evaluated the impact of the YFP program implemented in Utah during the 2003–2004 school year. The researchers surveyed both youths and parents and found the program to be successful in preventing antisocial behaviors in the young people involved. At-risk youths were found to be more successful when mentoring and 4-H activities were combined in the program. This Utah YFP mentoring program had significant positive correlations for strengthening the protective factors of academic achievement, social competence, family bonds, and community attachment. Additionally, parents surveyed reported increased levels of parental efficacy. Overall, the Utah YFP study confirmed that combining mentoring and 4-H had positive impacts on the youths and families who participated and helped Extension professionals reach youths who had not traditionally been involved in the 4-H program.

## Methods

We undertook our study to determine whether the North Dakota YFP program was performing similarly to the Utah YFP program in helping youths improve academic performance, increase school attendance, enhance social competencies, strengthen family bonds, increase developmental assets (belonging, independence, generosity, and mastery), and decrease juvenile delinquency. We used the qualitative mapping technique REM to confirm the findings and investigate outcomes with greater depth. Using this technique allowed us the opportunity to gather intended and unintended outcomes.

To identify program outcomes, we convened a focus group of community members in the region where youths were involved in the YFP program. The 14 participants were mentors, family members, community members, and youths over the age of 18 who had previously participated in the mentoring program as well as individuals not directly associated with the mentoring program. The group included members aged 18–70; the majority were Native American. All were from the reservation, which is a frontier demographic population.

The focus group session was 90 min in length and involved the use of REM to diagram the intended outcomes and impacts of the program as well as unintended impacts and potential next steps (Chazdon et al., 2017; Emery, Higgins, Chazdon, & Hansen, 2015; Kollock et al., 2012). We chose this method of evaluation because of the complexities of the YFP program, the diverse cross-section of people involved in the program, perceptions about results that were not originally intended, and informal sharing among residents about “ripples” of the program that they were seeing in their school and community (Chazdon et al., 2017).

REM involves pairing participants for interviews in which they reflect on appreciative inquiry–type questions relative to the program. Appreciative inquiry is a method originally developed to help interested parties better understand what is working in organizations rather than focus on what is not working and try only to fix the problems (Cooperrider, Sorenson, Whitney, & Yager, 2000; Cooperrider, Whitney, & Stavros, 2003). This method allows groups or organizations to reflect on high points from the past and move them into the future. Appreciative inquiry questions encourage participants to think about things appreciated, valued, and possible for their organization.

Appreciative inquiry involves use of a 4-D model to guide participants during interviews and reflection. The four Ds are discovery, dream, design, and destiny (Cooperrider et al., 2000). The REM process primarily focuses on the discovery phase, where individuals interview each other and discover high points or proud moments as they relate to the program analyzed. We did not use the subsequent phases of appreciative inquiry. To facilitate our REM process, we provided focus group participants with the following prompts:

- Tell a story about something you have seen change in your community related to the YFP program.
- Is there anything you are proud to share? New ways to work? Tell others about what you or your family learned?
- List an achievement or a success your family, school, or community had based on your learning from the YFP program. What made it possible?

The REM approach we used was “in-depth rippling,” where the most impactful events are concentrated on by the group (Chazdon et al., 2017; Emery et al., 2015). As narratives were shared by each participant and details added by others, key topics were written on a large piece of paper posted on the wall and mapped by a facilitator. Spin-off activities and events that emerged from the program relative to each story also were captured on the map. Additionally, the mapped stories and their ripples were entered into a computer mapping program in more detail than that included in the handwritten map created during the session.

We analyzed the results of the mapping exercise using the community capitals framework (Emery & Flora, 2006; Flora, Flora, & Fey, 2004). This framework has been used as a systematic method for analyzing mapped data and involves assessing seven types of capital necessary for a community’s healthy ecosystem, vital economy, and social well-being. The seven capitals are natural, cultural, human, social, political, financial, and built capitals.

## Results

The intended outcomes of the program included improved academic performance, increased school attendance, enhanced social competencies, strengthened family bonds, increased developmental assets (belonging, independence, generosity, and mastery), and decreased juvenile delinquency. Similar to the Utah evaluation results, there was evidence that these outcomes had occurred in multiple, varied ways, as described by the focus group members. In addition, the REM provided evidence of multiple unintended outcomes, such as an increase in financial capital as a local youth-led business expanded, an increase in cultural capital from programs developed specifically for the Native American culture, and an increase in social capital in the form of new community partnerships developed to assist the region.

We reviewed the map and found examples of all seven community capitals. The strongest evidence was related to the expansion of human, social, cultural, and political capitals. Table 1 documents the total number of observed effects and examples for each capital.

**Table 1.**

Evidence of Intended and Unintended Outcomes, by Community Capitals, Identified in the 4-H Youth and Families with Promise Program Ripple Effect Map

No. of reported examples	Examples of intended outcomes	Examples of unintended outcomes
80	<ul style="list-style-type: none"> <li>• Job skills were developed through work with Sioux Image.</li> </ul>	<ul style="list-style-type: none"> <li>• Adults took increased ownership in local</li> </ul>

communities.

- Youth leadership expanded.
- Youth engagement with tribal officials was established.
- Hope expanded among adults, parents, and caregivers.
- A sense of pride was developed in the Sioux Image business and among youths involved in leadership roles.
- Business acumen increased.
- Grade point average increased.
- School attendance increased.
- Youths started to run Red Gym of Dreams, a local gymnasium.
- Youths partnered with English teachers to develop a game to support student literacy.
- Running groups and community 5K races were started to encourage healthful lifestyles.

Social capital

38

- Youths, parents, and grandparents worked together on projects.
- Family members reconnected through family-night-out activities.
- Antibullying Clothesline Project was started because of Red Gym of Dreams activities.
- New networks and connections were developed in tribal food programs.
- Americorps employees and Extension staff connected with local organizations.

Cultural capital

18

4-H shooting sports/archery programs were started, linking cultural activities and competition.

Activities during family-night-out events focused on cultural traditions such as medicine bags.

- A 4-H logo that incorporated the 4-H clover and a tribal medicine wheel was created.
- Elders' stories were captured through video.
- A nutritionist at Indian Health Services restructured meal plans to incorporate traditional Native American foods for schools, senior nutrition programs, and the community.

- A sovereignty coalition was started for local gardening programs.
- YFP representatives worked with tribal historian and ethnobotanist to bring traditional, healthful foods to local communities.
- Culture was showcased through traditional dancing and singing at a national Epsilon Sigma Phi conference and the Native American Smithsonian Museum.

Political capital

11

- Youths connected with President Barack Obama and First Lady Michelle Obama during their visit to Standing Rock and subsequent visit by youths to the White House.
- Youths met with the Standing Rock Tribal Council to speak about leadership on the reservation.

- New policies were developed for tribal food programs.
- The Tribal district provided more youth support and encouraged more youth voice.

Financial capital

8

- Community participated in fund raising to build youth leaders and honor youths.
- Product sales in Sioux Image allowed additional equipment to be added to the business.
- Concessions managed by

youths in Red Gym of Dreams helped support local Powwow, Head Start, Senior Trip, and Sun Dance Group.

#### Built capital

4

- New playground was constructed.
- Sioux Image business was established.
- A recycling program was started in the school.

#### Natural capital

1

- 4-H clubs around gardening and horticulture were established.

Multiple stories told during the REM process provided rich qualitative data. Examples of the effects of the youth mentoring program relative to three areas are further described in the subsections that follow.

## Sioux Image

Sioux Image is a small screen printing business developed in the region as a partnership between youths and mentors and through which youths learn business, public relations, marketing, and leadership skills. The business started with multiple specialty machines, and the youths are responsible for ordering, production, and sales. Participants take pride and ownership in the business and are accountable for the products. In the past, youths not involved in the program had tried to take Sioux Image items without paying, but those involved in the business no longer allow that to occur. Youths involved with Sioux Image view running a screen printing and embroidery business as a viable career option. One former youth participant is currently in a graphic design program and credits her involvement in Sioux Image and the YFP program as the reason for her choice in education. People involved in the program initially as youths have returned as adult mentors. All of the Sioux Image business impacts described were ripple effects from the YFP program.

## Red Gym of Dreams

Outcomes shared during the REM process included the Red Gym of Dreams, a local gymnasium named by the youths who have taken ownership in running it and planning the events that take place there. These events have included basketball tournaments, open gym nights, and an antibullying project. The youths take care of the gym's maintenance, help open and close the gym, plan and run the concession stand, and have established their



own sportsmanship rules. Youths involved have increased their social competencies and developmental assets, including goal setting, sportsmanship, compassion for others, positive attitude, and giving back to younger youths and the community. They also report improvements in their physical and mental health. The gym offers a safe, positive place for youths to go. Anywhere from 15 to 50 youths participate in gymnasium activities daily, which are large numbers for a very rural area.

## President's Visit

In the summer of 2014, President Barack Obama and First Lady Michelle Obama traveled to the Standing Rock Reservation. During the visit, political capital was built as the president and first lady met with young people to talk about issues affecting tribal youths. The conversations included six youth leaders involved in the 4-H National Mentoring Program in the region. After this meeting, these youth leaders began conducting school assemblies and were invited to dine with the president at the White House. It was reported that some of the youths involved in this conversation were originally shy but that their self-esteem and confidence were raised through participation in the YFP program and these newfound developmental assets allowed them to feel comfortable interacting with the president of the United States. The youth leaders are committed to continuing the conversation on youth issues and have now gone to the Tribal Council to ask for support of youths in leadership roles. The REM process captured a rich description of this developmental experience as viewed through the collective lens of the focus group participants.

## Conclusions and Recommendations for Extension Professionals

The use of REM to gather evidence indicating that Extension programs produce multiple outcomes should be considered when selecting evaluation methods. The REM process produces stories told from many perspectives, documents change associated with intended and unintended results, and generates excitement and motivation for future work as the visual maps are created and reviewed.

Additionally, using the community capitals framework as the lens for analyzing REM results of a youth development program allows Extension professionals and other participants to see how the program connects to the greater community. As the mapping process unfolds and the intended and unintended outcomes are captured, the results highlight how Extension youth work ripples out and effects changes in the community's natural, cultural, human, social, political, financial, and built capitals.

As suggested by the outcomes of the YFP program captured in the REM data, implications for Extension programming include the need to plan deliberate opportunities for youth engagement in local businesses or community organizations. Through endeavors such as working at Sioux Image or running the Red Gym of Dreams, youths realized the importance of these efforts to community development and saw the opportunity to make a difference.

Additionally, Extension professionals planning programming for 4-H youths should consider incorporating activities that reflect their community's culture. Encouraging exploration into a region's cultural background can lead to development of cultural capital and pride in the local community, as documented by the YFP REM results.

Our study results also confirm that providing Extension-led travel and leadership opportunities for youths that incorporate youth voice can motivate young people to accept additional responsibilities and leadership activities in their home communities. Travel activities that allow connections with Extension partners in other parts of the country and with national leaders further empower youths and build the developmental assets they need to be

productive members of society.

Another implication indicated by our study is that projects involving youths can include collaborations across multiple areas of Extension. Through the YFP program, youths gained positive life skills such as gardening, implementation of proper nutrition, attention to wellness, and family financial planning. In addition, critical workforce expertise gained will assist them in attaining their education goals and securing career opportunities. Training and education in entrepreneurship assisted youths in using skills gained to develop increased business activity. These entrepreneurial skills translated into the improved economic vitality of the Standing Rock Reservation through additional jobs for youths and adult tribal members.

Our results also contribute to the understanding that a key component of Extension youth programming is purposeful inclusion of opportunities for youths to interact with caring adults. As a result of mentor relationships in the YFP program, youths exhibited positive changes in attitudes and behaviors. Most mentors were Native American and related well to the tribal youths. Strong, trusting relationships allowed youths and mentors to share traditions, stories, and experiences.

Extension youth programs can be strengthened through the inclusion of parents and caregivers as well. In the YFP project, these individuals felt an increased sense of community through family-night-out events and community activities planned by youths, mentors, and North Dakota State University Extension professionals. Parents and caregivers have begun to offer new ideas for Sioux Image and other entrepreneurial activities that may further increase economic and community development in Sioux County as a whole.

The study reported here provides further evidence that mentoring programs make a difference in the lives of first-generation Extension youths and families. Using experiential learning, youths, mentors, community members, and Extension professionals constructed a sustainable program and participated in educational opportunities to build life skills on the Standing Rock Reservation. The YFP mentoring program's intended and unintended ripples on the reservation offer hope for other Extension youth, family, and community asset-building programs.

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