



Healing through Education, Art and Resiliency Teaching (HEART)

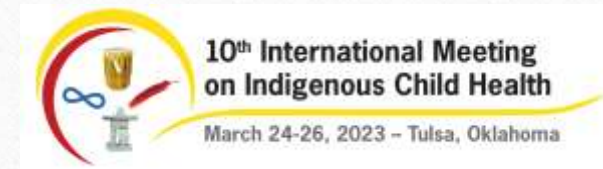
Dr. Julie Alexander-Ruff

March 25

10:30 – 12:00

Faculty/Presenter Disclosure

- In the past 24 months, Drs Julie and William Ruff have no relevant financial relationships with the manufacturer(s) of commercial services discussed in this CME activity
- We do not intend to discuss an unapproved/investigative use of a commercial product/device in my presentation.



All speakers must complete this slide; information should match the disclosure of conflicts of interest that was submitted. If you have co-presenters, include all names.

Overarching
Vision
Integrating
Teaching,
Research
and
Engagement

Create

Create sustainable relationships with an American Indian community

Ascertain

Ascertain which health issues the community is concerned about-such as low high school graduation rates and high level of school absenteeism.

Build

Build resiliency skills for both teachers and children in coping with at-risk children to decrease the harmful effects of historical trauma ,chronic illness, behavioral challenges and family breakdown

Aim and Scope

Facilitate resilience in elementary-aged children

- Provide an opportunity for self-expression
- Built upon positive student – teacher relationships through monthly coaching.

Work with both teachers and students to increase student resiliency

- All children participate in monthly art sessions and end of year art exposition.
- Currently 200 participants
- Data collected only from students with parental permission. All teachers consented and participated in classroom observations and discussions



Problem and Purpose

- Although there is a growing body of evidence pertaining to individual resiliency, very few interventions address resiliency and socio-emotional well-being at the classroom level
- The purpose of this research is to create and evaluate a set of interventions implemented at the classroom level. Specifically:
 - Increase student resiliency and subjective well-being
 - Facilitate a positive classroom environment
 - Reduce disparity in health and education currently experienced within Montana's American Indian communities.

Population

- Rural Northern Plains Indian Reservation in Montana
- Public Elementary School 3-6th graders ages 8-13 years
- 200 children, 95% AI/AN
- >95% below the poverty level
- School-based Health Clinic Nurse Practitioner with established community relationship
- Experienced Instructional Leader



Challenges to the Wellbeing of Native American Children

Effects of historical and ongoing trauma

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graph TD; A[Effects of historical and ongoing trauma] --> B[Social determinants of health]; B --> C[Physical and mental health inequities]; C --> D[Need for culturally sensitive and congruent health care and education services]; D --> E[Trauma informed health care and education services];
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Social determinants of health

Physical and mental health inequities

Need for culturally sensitive and congruent health care and education services

Trauma informed health care and education services

Effects of stress on growing children

Physical complaints:
headache,
stomachache, high
blood pressure

Emotional
complaints: sadness
depression anxiety

Exhaustion, fatigue,
irritability

Lack of
concentration

Unhappiness

Behavioral problems

Absenteeism

High School Graduation Rates

| Graduation Rates | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|-----------------------|------|------|------|------|------|------|------|------|------|------|
| All Fort Peck Schools | 65 | 73 | 79 | 86 | 71 | 89 | 78 | 84 | 85 | 84 |
| Wolf Point HS | 92 | 97 | 95 | 84 | 82 | 84 | 84 | 96 | 86 | 87 |
| Poplar High HS | 49 | 57 | 65 | 89 | 58 | 100 | 66 | 76 | 86 | 86 |
| Brockton HS | 80 | 75 | 100 | 100 | 100 | 70 | 88 | 60 | 50 | 71 |
| Frazer HS | 43 | 55 | 71 | 78 | 100 | 88 | 91 | 100 | 80 | 40 |

Source: Montana Office of Public Instruction data request fulfilled in October 2022 by Robin Clausen, PhD, Research Liaison

There are between 100 and 110 students per grade across the four Fort Peck high schools. In 2012 and 2013, less than 75 of these students graduated. In more recent years, this number has been between 90-100. Identification of the 15 or fewer students each year who are at risk of not graduating, and providing focused support is one strategy to improve health long term in Fort Peck.

| School Attendance | | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Satisfactory Attendance (>=95%) | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
| All Fort Peck Schools | 42 | 48 | 51 | 45 | 40 | 38 | 40 |
| Wolf Point High School | 26 | 27 | 33 | 30 | 29 | 34 | 35 |
| Wolf Point Middle School-7-8 | 21 | 31 | 43 | 37 | 38 | 57 | 37 |
| Southside School-Wolf Point | 30 | 30 | 45 | 34 | 42 | 49 | 49 |
| Northside School-Wolf Point | 33 | 37 | 43 | 31 | 30 | 45 | 38 |
| Poplar High School | | | | | 22 | 16 | 24 |
| Poplar Middle School 7-8 | | | | | 30 | 17 | 29 |
| Poplar 5-6 | | | | | 72 | 28 | 35 |
| Poplar Elementary | | | | | 33 | 33 | 29 |
| Brockton Elementary | 98 | 99 | 80 | 38 | 53 | 52 | 19 |
| Brockton High School | 15 | 26 | | | | 18 | |
| Frazer High School | 21 | 29 | 27 | 23 | 28 | | 21 |
| Frazer Middle School 7-8 | 32 | 37 | 44 | 44 | 36 | | |
| Frazer Elementary | 26 | 60 | 47 | 53 | 40 | | 23 |

Source: Montana Office of Public Instruction data request fulfilled in October 2022 by Robin Clausen, PhD, Research Liaison

There are around 2000 students total in Fort Peck Schools. Of those, only about 750 currently have satisfactory attendance, which is set at attending 95% or more of all school days. The percent of students with satisfactory attendance has decreased during the pandemic.

Identifying, in real time, students with serious attendance concerns, and providing interventions and support to re-engage them in school, could help improve health outcomes long term in Fort Peck.

| Suicide | | 2017 | 2018 | 2019 | 2020 | 2021 |
|---------------------|-----------------------|-------------|-------------|-------------|-------------|-------------|
| Race | Age | | | | | |
| American Indian | Ages 5-18 years | <5 | 0 | <5 | 5 | <5 |
| | Ages 18 years & older | <5 | <5 | <5 | <5 | <5 |
| White | Ages 5-18 years | 0 | <5 | <5 | <5 | 0 |
| | Ages 18 years & older | <5 | <5 | <5 | <5 | 5 |
| All Races* Combined | Ages 5-18 years | 8 | 7 | 10 | 8 | 6 |
| | Ages 18 years & older | 6 | 10 | 6 | 7 | 10 |

| Substance Use | | Age | 2018 | 2019 | 2020 | 2021 |
|----------------------|-----------------------|------------|-------------|-------------|-------------|-------------|
| Race | Age | Age | | | | |
| American Indian | Ages 5-18 years | <5 | <5 | <5 | 9 | <5 |
| | Ages 18 years & older | 27 | 24 | 35 | 33 | 32 |
| White | Ages 5-18 years | 0 | <5 | <5 | <5 | 0 |
| | Ages 18 years & older | <5 | 7 | 8 | 8 | 13 |
| All Races* Combined | Ages 5-18 years | 8 | 5 | 7 | 12 | <5 |
| | Ages 18 years & older | 152 | 97 | 63 | 110 | 96 |

* Includes unknown and "other" race.

Source: Data request from DPHHS fulfilled in November, 2022. Records were identified using the case definition and methods developed by the DPHHS Substance use and mental health indicator ICD-10-CM Codes for use with EMS Data

Traits of Resiliency

Sense of humor-
this can be
fostered and
encouraged

Competence: this
can be learned
with patience

Optimism

Patience

Tolerance

Improved self-
esteem

Coping skills

METHODS:

Community Based Participatory Research

CBPR

Involves the community

Family

Participants

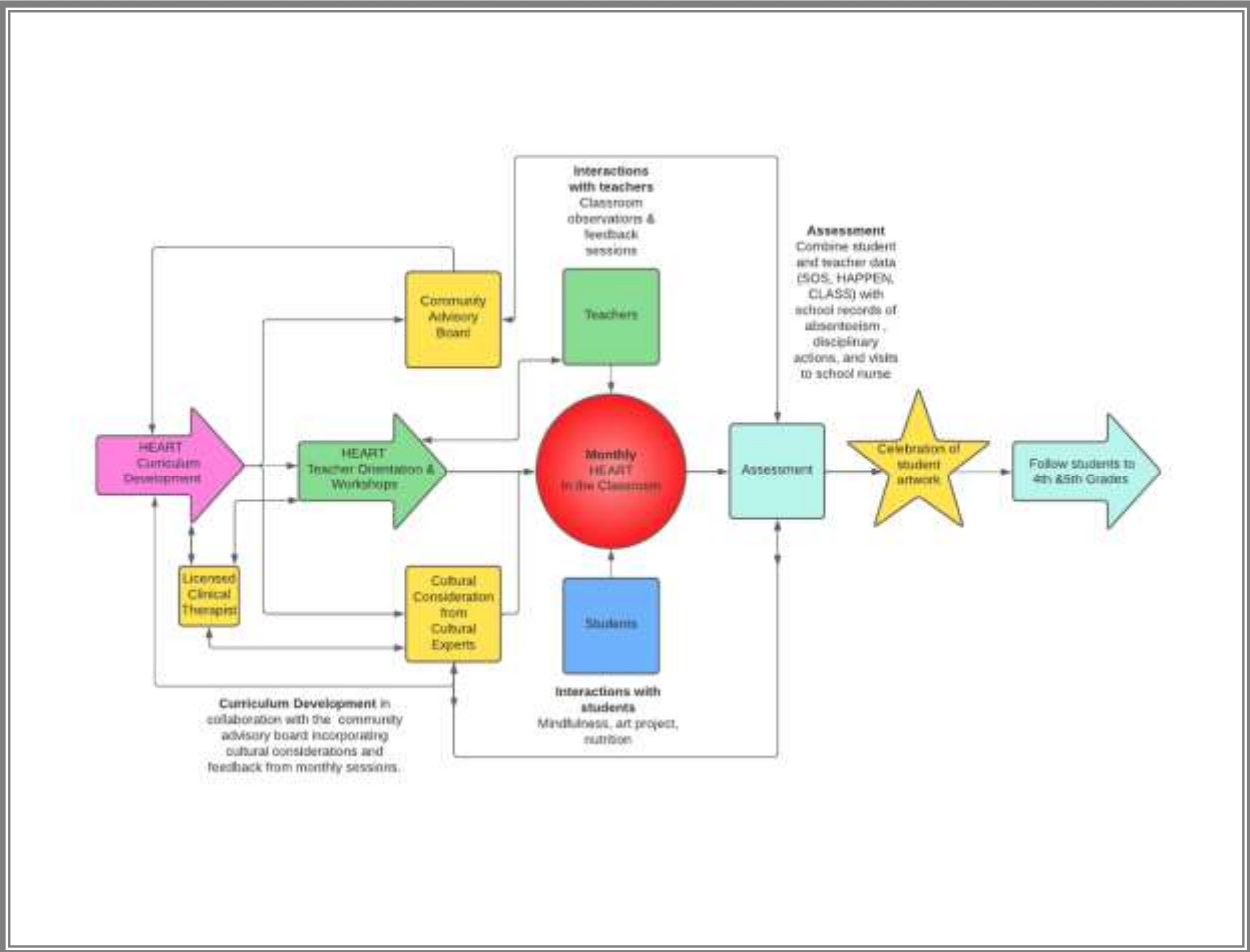
Community experts

Tribal elders

Parents

Meet monthly

HEART PROJECT LOGIC MODEL



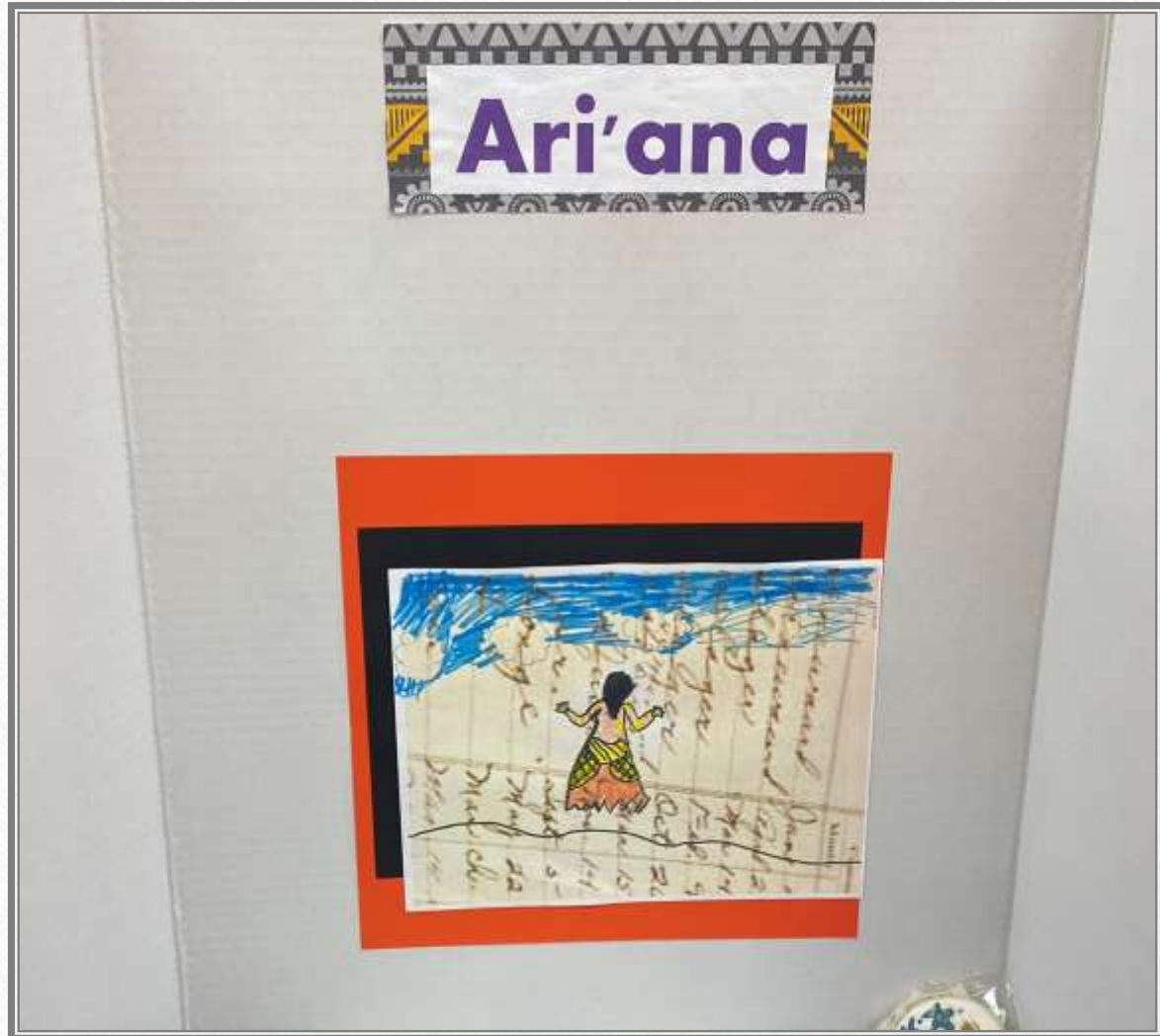
Mixed Methods Study

- Quantitative

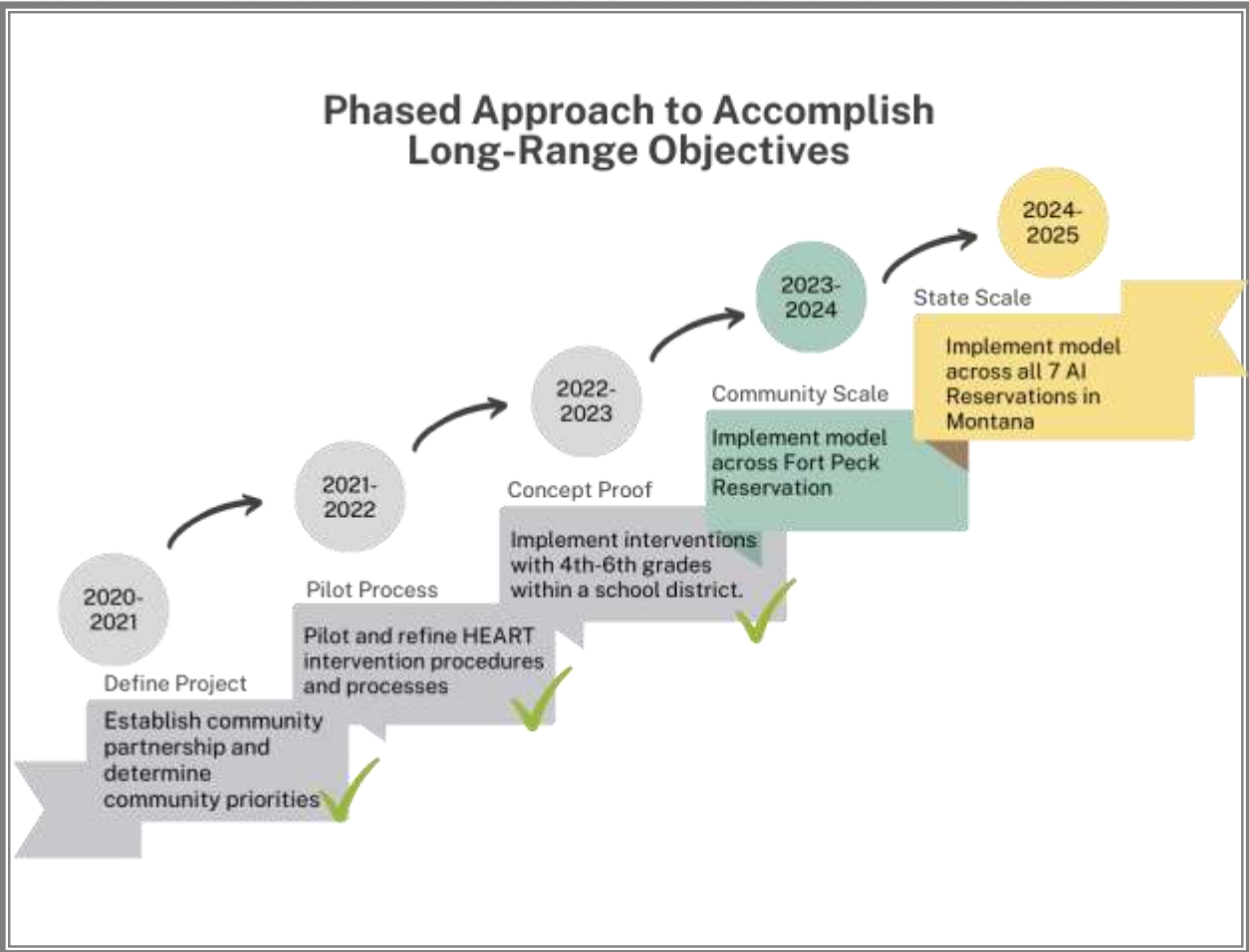
- Collection and analysis of Pre- and Post-test scores on SOS (sources of strength) and PASS (Pupil Assessment of Self and School), Analysis of Pre- and Post-test data on absenteeism, visits to school nurse and significant behavioral incidents, suspensions and expulsions.

- Qualitative

- Interviews with teachers focused on student resiliency and improved procedures
- Focus groups of parents focused on student well-being



Five Phases of the Project



Student Level Intervention

- Monthly Sessions with children
 - Meditation / Deep Breathing
 - Introduction of fruit and vegetables as healthy snack alternatives. Nutrition education.
 - Self expression on well-being topic though the medium of art.
 - Indigenous children's literature-emphasizing strengths
- Participation of Elders and a cultural /language expert





Examples

NOTE: Permission to use images of child has been granted and permissions are available at Wolf Point Public Schools

Heart Health

"Things I Love"

Colored Pencil on
Paper

Cardiovascular
Lesson:
Stethoscopes

Heart Healthy
Foods



TRADITIONS



Elder Talk

Respect and Honor

"Letter to my future self"



Physical Activity

“How do I Stay Active?”

Values of self-respect, courage

Paint Pens on Canvas





School Closure



- Covid-19 Story

Johns Hopkins Center for American Indian Health

- Resilience

- Pinch pots and Coil pots- Clay





Silver Linings

Watercolor

" I am Powerful"

Paper mache bunting



Classroom Level Intervention

- 5-hour workshop for teachers on culturally responsive and trauma-informed teaching strategies
 - Workshop focused on asset-based assessment and feedback
- Monthly Classroom Observations
 - CLASS observation protocol used to collect information on student-teacher relationships and classroom culture
 - Teachers provided individual feedback and coaching based on observation results
 - Teachers meet as a group to review student art and reflect on building resiliency in the classroom.
 - NOTE: Permission to use images of children has been granted and permissions are available at Wolf Point Public Schools



A photograph of three arrows with feathers and a quiver on a light-colored surface. The arrows are arranged diagonally across the frame. The quiver is made of light-colored material and has a red bead and a blue bead attached to it. The background is a light, textured surface. The text "Data Outcomes" is overlaid in the center of the image.

Data Outcomes

EARLY FINDINGS FROM ART FOR WELLNESS PROGRAM



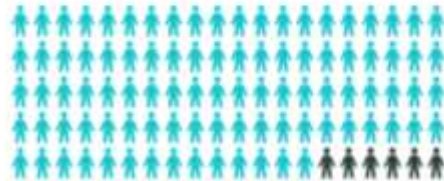
- 1 High prevalence of school nurse visits for stress related symptoms
- 2 Disparities in exclusionary discipline
- 3 Lack of trauma-informed environment in school
- 4 Increase in teacher understanding of cultural competence



OUTCOMES

A positive indicator was seen in student participation changes in the art and wellness activity as the year progressed. During the first several sessions a significant number of students refused to participate or destroyed their work. By the last 3 sessions, 100% of students participated and turned in their artwork by the end of class period.

94% OF STUDENTS REPORTED LOOKING FORWARD TO HEART PROJECT EACH MONTH



Teacher/Student relationships are correlated with overall classroom climate and student resiliency.



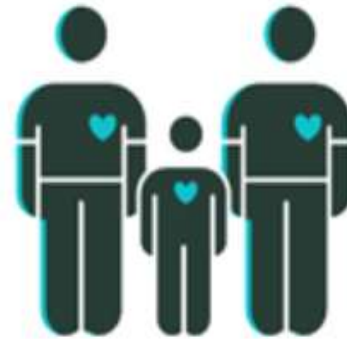
AVERAGE CLASS SCORE GROWTH

Average CLASS scores showed significant growth within one school year from 3.75 to 4.4. The effect size of teacher intervention was 17.3%



ATTENDANCE RATE

At the end of the 21-22 school the average Northside School attendance rate was 87% up from 73% in the 2018-2019 school year prior to the COVID pandemic. Pandemic attendance was reported as 35% in 19-20 and 45% in 20-21 school years, respectively

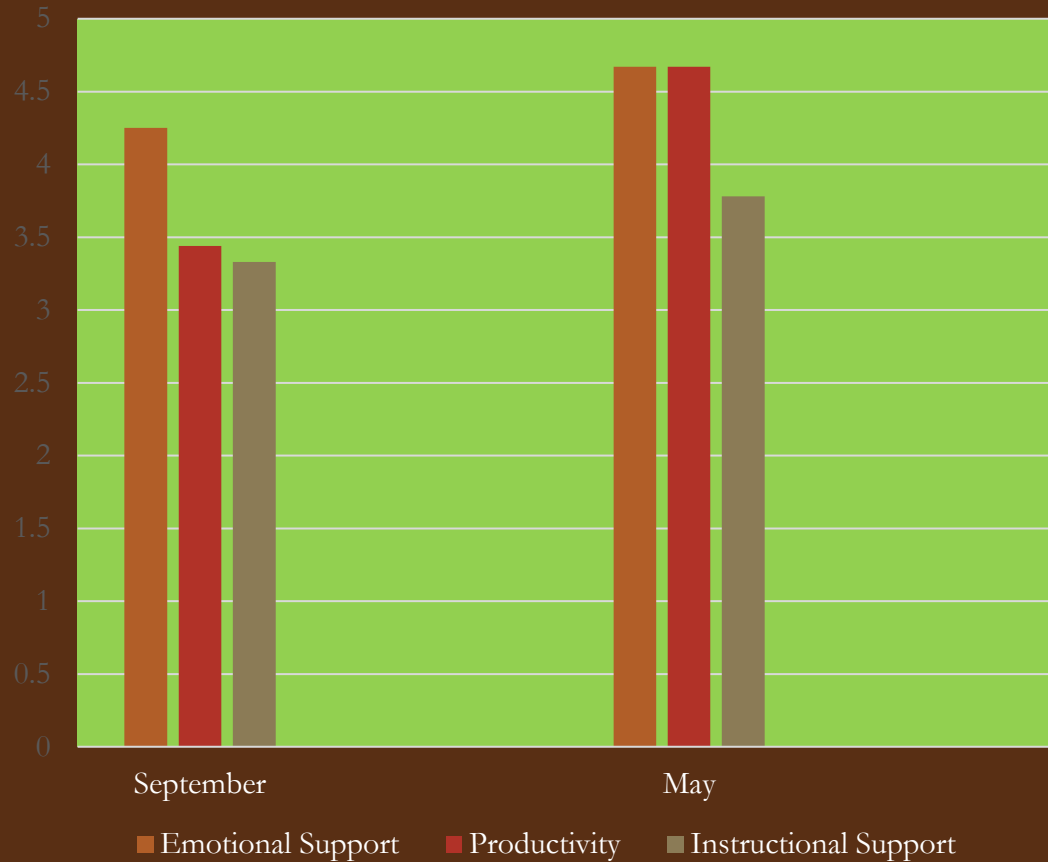


"My family came to see my art. It made me proud to show my Elders"

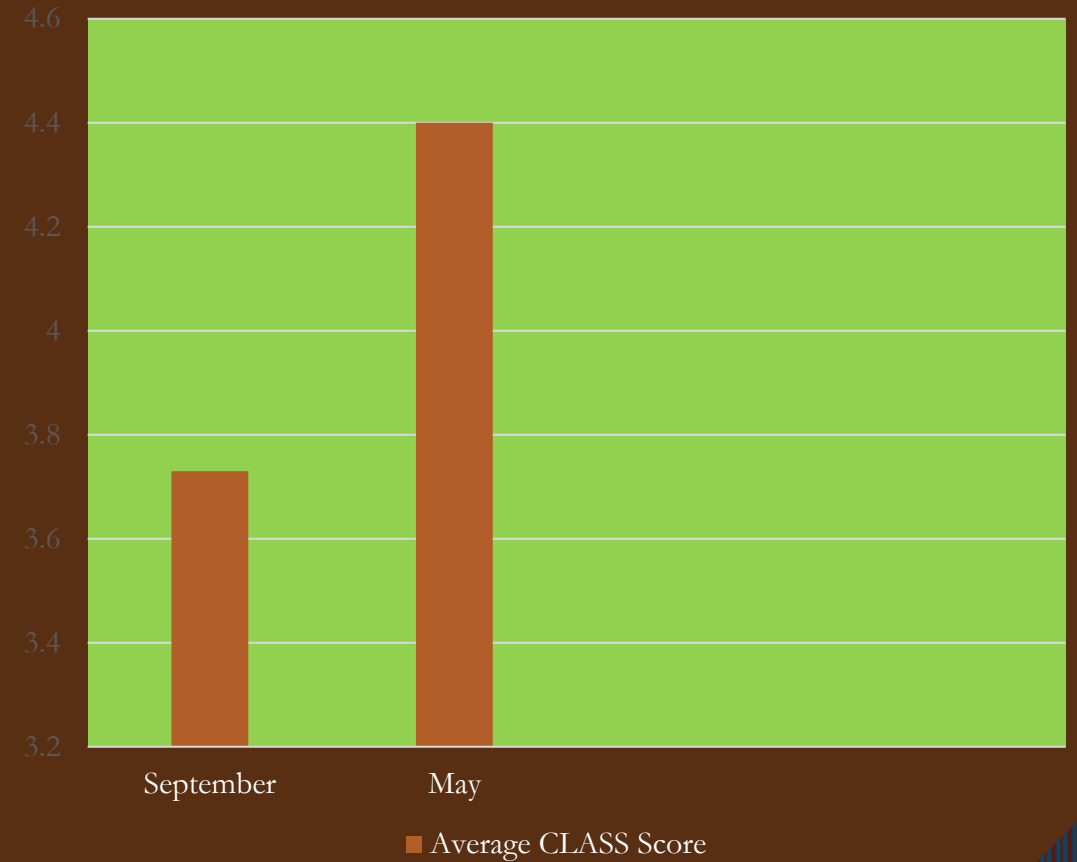
Families reported enjoying the art show and noted growth in their student's emotional development.

Classroom Assessment Scoring System Observations (Measures Teacher-Student Relationship)

Scores by Dimension



Average CLASS Score

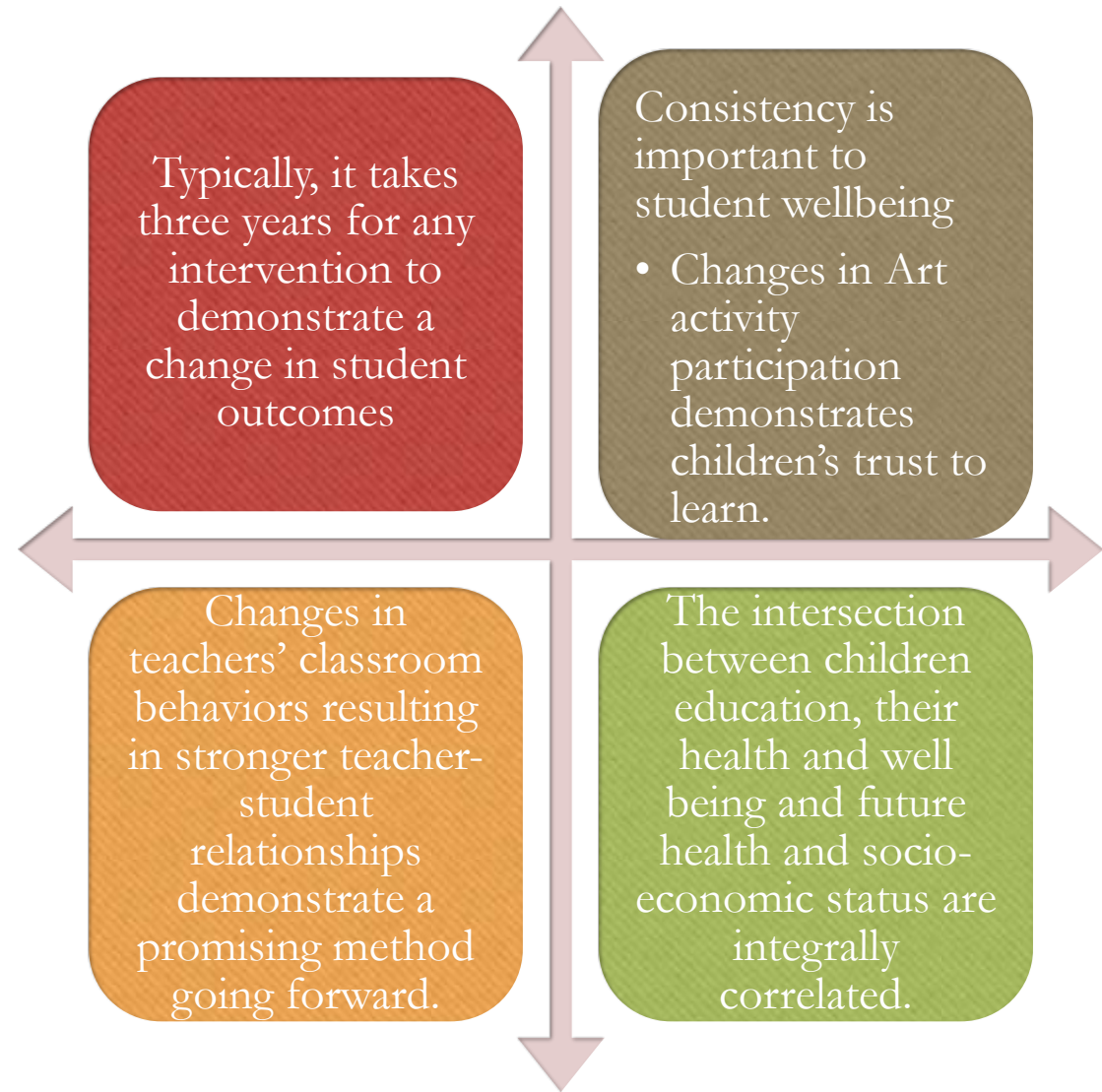


Community Advisory Board Wisdom



- Warm reception, enthusiasm from community
- Interest in teaching children their cultural values, native language
- Children have great respect for elders
- Using the customs and values of the four R's: respect, relationship, reciprocity and relevance
- Arts are cherished: Visual, dance, virtual pow wow
- Stressors of Covid-19 are pronounced in community

Change is a Process (Not an Event)



Conclusions

American Indians living in rural communities experience a heavier burden of health disparities than any other ethnic group in the United States (IHS, 2014).

The American Association of Colleges of Nursing includes practice in a multicultural environment and the skills needed to provide culturally competent care as essential elements of nursing education.

Resilient children have better physical and mental health and self-regulatory skills.



Support



- I wish to offer my sincere gratitude to Dean Sarah Shannon and the Mark and Robyn Jones College of Nursing for her unwavering support of my work and my passion to assist the children of the Assiniboine and Lakota , Dakhota and Nakota Sioux tribes, and the following grantors.
- The Fort Peck Tribes
- Montana State University Faculty Excellence Grant
- STTI grant
- CAIRHE grant
- Gianforte Family Foundation Grant



Questions

