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## The Power of Place-Based/Outdoor Education in a Rural District: Effective Leadership to Increase Learning, Engagement, and Belonging through Place-Based Education

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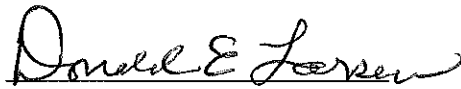
The Power of Place-Based/Outdoor Education in a Rural School District:  
Effective Leadership to Increase Learning, Engagement, and Belonging  
through Place-Based Education

By

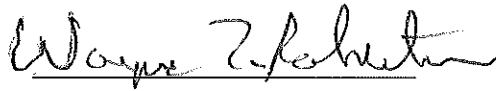
Mary Sewright

Accepted in Partial Completion  
of the Requirements for the Degree  
Doctor of Education

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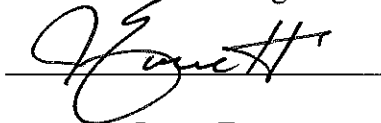
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Mary Sewright

June 2023

**THE POWER OF PLACE-BASED/OUTDOOR EDUCATION IN A RURAL SCHOOL  
DISTRICT: EFFECTIVE LEADERSHIP TO INCREASE LEARNING, ENGAGEMENT,  
AND BELONGING THROUGH PLACE-BASED EDUCATION**

A Dissertation  
Presented to  
The Faculty of  
Western Washington University

In Partial Fulfillment  
of the Requirements for the Degree  
Doctor of Education

By  
Mary Sewright  
June 2023

## **Abstract**

### **The Power of Place-Based/Outdoor Education in a Rural School District: Effective Leadership to Increase Learning, Engagement, and Belonging through Place-Based Education**

The research for this qualitative bounded case study on place-based/outdoor education in Mount Baker School District focused on fourth through sixth grades. The research was done mainly through interviews collecting the voices of 37 students including 16 fourth graders, 11 fifth graders, and 10 sixth graders. Twenty of those students were boys and 17 were girls. A total of nine District staff were interviewed including seven teachers and two administrators. Leaders at each of our Community-Based Organizations from Common Threads Farm, Wild Whatcom, Nooksack Salmon Enhancement Association, Camp Saturna, North Cascades Institute, and Whatcom Environmental Education Coalition making up our Connections Program were also interviewed.

The purpose of the study was to identify and analyze the impact of the Connections Program in Mount Baker School District as well as identify the leadership and essential components needed for place-based education to have a meaningful and lasting positive impact on students' lives. Among the outcomes the study may examine are the social-emotional and academic fulfillment. The following questions guided the research:

- What characteristics of place-based learning distinguish this approach to learning?
- In what ways, if at all, does place-based learning enrich the learning experiences of students in a rural school setting?
- In what ways, if at all, is leadership in a place-based learning setting different from leadership in a setting that lacks a place-based focus?

- What do leaders in place-based learning settings do to support and sustain the success of their students?

The analysis of the research indicated that place-based learning provides in-the-moment, real-life learning that helps students make connections to their local surroundings and how they can become stewards of our air, lands, and waterways.

Leadership necessary to make place-based education successful must be equity-based, committed, collaborative, supportive, and willing to take risks.

Mount Baker School District's Connections Program aligns learning for Kindergarten through sixth grade. It has caught the attention of the media and local leaders; financial support has been garnered through the Washington State Legislature.

## **Dedication/Acknowledgements**

I could not have done this without my cohort of doctoral students!

We did it together!

Faculty of the Department of Education Leadership & Inclusive Teaching

Western Washington University

Advisor: Dr. Tim Bruce; Committee Chair: Dr. Don Larsen; Faculty: Dr. Wayne Robertson

Special thanks to Carola McGowan for her organization and support throughout the process!

Other Committee Members and Esteemed Colleagues, Leaders, and Friends:

Dr. James Everett, Meridian School District Superintendent

Dr. Chris Granger, Blaine School District Superintendent

Mount Baker School District Students and Staff

Bridget Rossman, Executive Director of Teaching and Learning

Mount Baker School District Board of Directors:

Russ Pfeiffer-Hoyt, Brenna Reaugh, Annie Elder, Ed Fox, Danielle Gray

Whatcom Environmental Education Coalition

Common Threads Farm

Wild Whatcom

Nooksack Salmon Enhancement Association

Camp Saturna

North Cascades Institute

Special thanks to Representative Alicia Rule for her Support and Advocacy for All Children!

Dedicated to my daughter Kjelby Mikkelsen and Family

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## **Chapter I**

### **Introduction**

*“Where is School? School is Wherever I am.”*

(Peterson, 2022, p.32)

The beauty of Mount Baker School District lies in its rich history and natural resources including forests, streams, the Nooksack River, Silver Lake, and the majestic Mount Baker which indigenous peoples named Koma Kulshan. It is important to acknowledge that it consists of the ancestral homelands of the Coast Salish Peoples, who have lived in the Salish Sea basin, throughout the San Juan Islands and the North Cascades watershed, from time immemorial. The Nooksack Indian Tribal lands are within and surrounding the area, so most Nooksack Tribal children are served in the schools. Another unique feature is that the Mount Baker Ski Area is within our District boundaries. Mount Baker School District is often referred to as East Whatcom County and encompasses 622 square miles with three elementary schools, a preschool, Mount Baker Academy, Mount Baker Junior High, and Mount Baker High School all serving 1,700 total students. Harmony Elementary, our preschool, Mount Baker Academy, and our secondary schools as well as our District Office are located in Deming, Washington. Acme Elementary is located in Acme, Washington. Kendall Elementary is located in Maple Falls, Washington. Heading east on Highway 542 or North on Highway 9 going towards the Mountain, the views and scenery with mountain ranges, lush forests and streams are spectacular. It is a great place to sight see, hike, bike, fish, climb, camp, and ski as well as a wonderful place to work, live, and go to school. Although this small rural district is considered poor economically, Mount Baker is rich in place-based educational opportunities.

I'm just grateful for the Mount Baker School District. They've always been such a gem to work with including teachers at the three elementary schools and all of the support staff. The Connections program was huge. It started with two school districts, Mount Baker and with Blaine. It could have easily fallen off after the pandemic when everything went back to normal, but Mount Baker continued to prioritize outdoor learning. I appreciate the traction that's happened, and I'm excited to see how it hopefully grows. (N. Zabel, personal communication, April 3, 2023)

Mount Baker School District drew me to the superintendency because of the unique resources and opportunities that offer students a rich spectrum of learning experiences and multiple career pathways. I chose to research place-based, outdoor learning because I want to cash in on the potential that this approach to learning has for student outcomes. Please note that I will use the terms place-based education and outdoor education interchangeably throughout this manuscript. Researcher and author John Hattie has done extensive research that includes multiple studies done by other researchers regarding the impact of outdoor programs. He assigns the learning modes he studies an effect size with any mode or strategy over 0.40 considered to have a desired impact on learning. According to Hattie (2012), outdoor programs for learning have an effect size of 0.52. This puts outdoor learning well above many other strategies people tend to buy into such as class size, homework, and early intervention (Hattie, 2012). I hope that this study will answer the question, "Why Baker?" for families on the fence regarding their children receiving education in Mount Baker School District.

My last five years as the Superintendent of Mount Baker School District have shown me the importance of Career and Technical Education (CTE) as well as Future Farmers of America (FFA) programs. These programs are points of pride in our school community as we are

nationally recognized through state and national awards and rankings. Prior to COVID-19 I noticed that, while our secondary program offered many opportunities for learning and leadership through outdoor education, the opportunities students experience at the elementary level were sporadic and based on Parent Teacher Association (PTA) support and field trips funded by student fees. Therefore, these opportunities were limited and not available district-wide.

During the 2020-2021 school year, while students were learning remotely and then eventually transitioned to hybrid learning, the opportunities for outdoor education began to change. We partnered with community organizations including Common Threads, North Cascade Institute, Camp Saturna, Wild Whatcom, and the Nooksack Salmon Enhancement Association. The Whatcom Environmental Education Coalition brought all these organizations together to collaborate with schools. On Wednesdays, which remained remote days throughout that school year, employees from community-based organizations worked with school staff to provide learning support and outdoor opportunities for sixth-grade students at Kendall Elementary. We observed increased engagement and enthusiasm for school with the students participating in the program. Based on this as well as positive feedback from staff and parents, we expanded this opportunity to sixth-grade students at all of our elementary schools. During the summer we offered a similar program that aligned classroom learning with outdoor education for kindergarten through eighth-grade students. Observing the impact that these programs had on student engagement, social emotional learning, and academic achievement inspired me as well as other staff members to expand on this by integrating outdoor learning for grades kindergarten-sixth grade, a program we called Connections. The success of the Connections Program also caught the attention of Washington State Representative Alicia Rule. She successfully advocated

for and convinced the Legislature to support outdoor education in Mount Baker School District and Blaine School District with \$640,000 allocated from the state budget. My research will assess the impact of these outdoor programs through student, staff, and parent voice as well as through social-emotional learning and academic outcomes.

Rural school districts have an abundance of place-based opportunities that can make teaching and learning more relevant and engaging for students of all backgrounds and experiences. This relevant and engaging learning has the potential of providing more equitable and meaningful pathways for students in preschool through high school graduation. As a superintendent of a rural school district, I have observed the underuse of resources due to funding, staff availability, teacher training, risk management, and a lack of vision accompanied by strategic actions. The need for more place-based education taking advantage of the rich resources in the Mount Baker area was the focus of a year-long strategic planning process. A committee of 27 people consisting of staff, parents, and community members studied and discussed place-based education. The current plan calls for alignment with integrated learning that includes place-based education at all grade levels (Mount Baker School District Strategic Plan, 2020-2025). My research study will evaluate the place-based, outdoor education programs at Mount Baker School District that took place in 2021-22 and that continued in the 2022-23 school year. The purpose of the study is to identify the benefits as well as challenges associated with implementing and sustaining place-based education; furthermore, the current study seeks to determine leadership needed for implementation and sustainability of successful place-based education models in rural school districts to promote student learning, authentic engagement, and a culture of belonging for all students. My hope is that this study will evaluate the extent to



which place-based education is effective and to provide direction as to how the Mount Baker School District might improve the quality of education to meet the needs of all students.

### **Problem Statement**

There is evidence that environmental education, which could be a significant component of place-based education, contributes to a number of key outcomes for youth (Demarest, 2020; Getting Smart, 2022; Lewicki, 2000; Loveland, 2003; Metzger, 2013; Smith & Sobel, 2010). Extant research shows positive outcomes across a range of impacts including: environmental knowledge, academic achievement, critical thinking, civic engagement, equity, and personal growth. The gap that I addressed as a researcher and leader is what leadership is needed to make place-based education sustainable and systematic; in addition, the current study identified direct and indirect benefits for youth as well as short-term and long-lasting impacts.

The purpose of my proposed research is to identify and analyze the impact of the current programs we are providing in Mount Baker School District as well as identify the leadership and essential components needed for place-based education to have a meaningful and lasting positive impact on students' lives. Among the outcomes the study may examine are social-emotional and academic fulfillment.

### **Research Questions**

The purpose of this study is to research leadership needed to implement and sustain successful place-based learning in a rural school district. My research will be guided by the following questions:

- What characteristics of place-based learning distinguish this approach to learning?
- In what ways, if at all, does place-based learning enrich the learning experiences of students in a rural school setting?

- In what ways, if all, is leadership in a place-based learning setting different from leadership in a setting that lacks a place-based focus?
- What do leaders in placed-based learning settings do to support and sustain the success of their students?

Findings from the current study will help guide educational leaders in implementing sound place-based education learning for students. More specifically, the study will highlight and guide school leaders in developing place-based opportunities for students in a rural setting that will help them learn the interconnectedness of where we live and how that knowledge relates to global issues. This learning should help students better relate school to their personal experiences. By embracing learning that helps them better understand the context in which they live and how they can understand the world more completely, students engaged in place-based education will be able to understand better their potential and future pathways.

Place-based education at its root is a humanizing practice that puts youth and the community in the center. It is an immersive approach to learning that empowers students to act as environmental stewards, caring for themselves, their peers, and the land and community where they live (Demarest, 2020, p. 6).

## Chapter II

### Literature Review

Children's literature is full of wisdom and creativity to capture the minds and hearts of our youngest learners. After all, these learners enter our educational system full of curiosity and wonder. What happens to that spirit for learning as they progress through our traditional system of education surrounded by walls with content shared through textbooks and lectures? Sir Ken Robinson did a series of TED Talks emphasizing the need for education to make a shift from conformity to personalized learning. According to Robinson, there is a need for an organic process to create conditions where kids can discover what excites their spirit and energy. Educators need to create conditions where kids' talents can flourish (Robinson, 2010). George Couros, author of *The Innovator's Mindset* (2015), believes that schools must encourage students to be creators and leaders.

Inspiration is one of the chief needs to today's students. Kids walk into schools full of wonder and questions, yet we often ask them to hold their questions for later, so we can get through "the curriculum." We forget that our responsibility isn't solely to teach memorization or the mechanics of a task but to spark a curiosity that empowers students to learn on their own. To wonder. To Explore. To become leaders. We forget that if students leave school less curious than when they started, we have failed them. (Couros 2015, p. 5)

Research has shown that place-based education, also known as outdoor education, can engage students in rigorous, meaningful learning that reignites the love of discovering they have when they enter school. Author Ellie Peterson (2022) explores the adventure of learning outside the classroom in her book, *School Is Wherever I Am*. This literature review will describe place-

based learning scenarios, name important components of successful programs, analyze student outcomes, and share student voice about outdoor learning experiences. The literature shows that place-based education is a successful avenue leading to academic learning and social and emotional well-being for all students. Indeed, school can be wherever you are, and my students and I are at Mount Baker. The literature I have reviewed has given me pertinent information about successful place-based programs for my research.

Key themes emerged as a result of my review of available literature, including peer-reviewed research, focused on place-based education. These themes include environmental education, elements that place-based education should include, curriculum design, training, and administrative support necessary to create and sustain viable programs. Place-based education puts students and community at the center while immersing students in learning that focuses on the well-being of themselves, their peers, and the place in which they live. In addition, it envelops the understanding that there is an interconnectedness of where we live and the world. While students learn about their local community, they build a more meaningful understanding of the world (Demarest, 2014). “Starting with our home place underlines the interconnectedness of us all. We all live in places. All places are similar. All places are different. Students need to grasp the complexity of our human connectedness and our uniqueness” (Demarest, 2014, p. 5).

The Center for Place-Based Learning and Community Engagement defines place-based learning as an immersive learning experience that “places students in local heritage, cultures, landscapes, opportunities and experiences, and uses these as a foundation for the study of language arts, mathematics, social studies, science and other subjects across the curriculum” (2022, p. 2). Getting Smart (2022) further states that Place-Based Education is situated inside global conversations about innovative instructional approaches that enable student agency, boost

access and opportunity, prioritize deeper learning, and personalize learning. The goals are to impact communities, increase student and teacher engagement, and boost academic outcomes. Learning is grounded in local contexts while challenging students to see a global picture through ecological, political, economic, and social lenses. Learning experiences are student-centered, personalized, relevant, and engaging. Students become highly informed and engaged citizens through place-based education and personalized learning (Getting Smart, 2022).

The Connections 2021-2022 Outcomes Report published by Whatcom Environmental Education (2022) and retrieved by the researcher in November 2022 showed positive results for Mount Baker School District and Blaine School District. The funding gave 1,335 students in Mount Baker 4,400 hours of nature learning including 1,026 outdoor instruction hours. Blaine School District had 444 students participate in 2,100 nature hours including 122 outdoor instruction hours. The following quotes from teachers reflect the student impacts:

- “My 3<sup>rd</sup> grade students enjoyed exploring trails, learning about the plants and animals, and playing fun games together” (Third-Grade Teacher, Acme Elementary).
- “An invaluable impact on my students’ well-being. I have watched a selectively nonverbal first grader light up and begin to speak while she worked in the school garden” (Teacher, Kendall Elementary).
- “Very meaningful experience for my students. My students loved planting trees!” (Fourth-Grade Teacher, Harmony Elementary).
- “So helpful to see students outside, and the interactions they had with peers and nature. They were very interested in learning about the plants—they were focused and asking high leveled questions. Mixing FUN with learning!” (Third-Grade Teacher, Blaine Elementary). (WhatcomEnvironmentalEducation.com, 2022)

Place-based education is an approach that can achieve the goals of environmental education. It helps students understand the environment, an awareness that often motivates them to be positive stewards of our lands and waterways. A study that analyzed 156 surveys from K-12 classroom teachers showed that collaboration is a key component for high levels of place-based education practice (Duffin & Perry, 2018). The Kickapoo River Institute implemented 100 days of interdisciplinary place-based learning. During this time students researched the Civil War veterans from the Kickapoo Valley; in addition, they researched the Kickapoo Indian Tribe. They built picnic tables and benches for the community. Collaboration with the Oregon Department of Natural Resources allowed them to monitor 250 acres for a wetland restoration project. Students created art pieces reflecting the natural land and cultural heritage as well as poetry about a prehistoric site. They discovered the geological history of the area and the Kickapoo River's changing course by investigating and analyzing 10 years of archival maps and recent aerial photographs. For the participants, a highlight was finding the source of the Kickapoo River and then hiking, canoeing, and biking 10 miles to its confluence with the Wisconsin River. The quantitative component of this research showed that 14 freshman students involved increased their grade equivalent scores in science from 10.6 to 13.6, social studies from 9.3 to 10.4, reading from 10.4 to 12.7, math from 8.5 to 12.6, writing from 8.5 to 12.4, sources of information from 8.2 to 11, literacy skills from 10.3 to 12.8, and the composite improved from 9.8 to 12.5. The research further identified four elements of success including the size of the learning community shaping attitudes, anchors of place, experience, and authentic assignments (Lewicki, 2000).

A school in Alaska took on projects that included Native science fairs, cultural atlases with multi-media presentations, interviews of elders, and traditional Native subsistence activities.

Results showed that, for students involved in place-based education, eighth-grade scores on CAT-5 math tests showed a gain over those for students who were not involved (Loveland, 2003).

Tillamook Junior High School is a leadership school that worked with the Oregon Department of Forestry. Students worked with the logging industry to conduct a snag study to calculate and map how many trees and stumps remained in logged areas. Participants bolstered their math skills while providing a service to the community by creating an interpretive walkway through the area (Loveland, 2003). “Beyond learning applied math skills, students took pride in working collaboratively and doing a project in the community” (Loveland, 2003, p. 8).

A Canadian study of the experiences of selected teachers implementing place-based education indicated that place-based education needs to be connected to outdoor learning to move away from the current trend of students spending too much time indoors (Miller & Twum, 2017). Students were encouraged to care for the environment through collaboration and problem solving. The researchers found that when students become more connected to the outdoor environment, they are more likely to care about the well-being of communities (Miller & Twum, 2017). Teachers found that place-based education promotes community engagement while building effective teaching and learning experiences. Successful implementation must address curriculum outcomes and assessment.

We’re not like an adventure program where we go to the best places in [province] to learn about a subject but we do emphasize that our students can make a difference in our community and we show them that by actually giving them projects that are happening in the community, and the end result is always a community presentation to open up to people beyond just the teachers in the program or the parents and [so the] public get to

see their work. Actually, some kind of change will actually happen because of our project. We'll build something at the end of the project or sell something, there's a tangible result. (Miller & Twum, 2017, p. 98)

Miller and Twum concluded that it is important for teachers to have knowledge of the skills needed for the outdoor learning they are providing and understanding of the local community. They must be able to integrate inquiry-based learning. Challenges to implementation include convincing administrators and students of the value of place-based education, deschooling, and dealing with the weather (Miller & Twum, 2017).

Sobel (2004) investigated the connections between the community and the environment as the genesis for affording students real-world learning experiences. He concluded:

Place-based education is the process of using the local community and environment as a starting point to teach concepts in language arts, mathematics, social studies, science, and other subjects across the curriculum. Emphasizing hands-on, real-world learning experiences, this approach to education increases academic achievement, helps students develop stronger ties to their community, enhances students' appreciation for the natural world, and creates a heightened commitment to serving as active, contributing citizens (Sobel, 2004, p. 7).

Extant research identifies two keys to successful place-based education: the learning should apply to all disciplines, and community members should have a role in educating students. This empowers the community to grow their social and human capital while giving students the desire to invest in themselves. A study done in 1998 included 400 interviews with students and 250 interviews with teachers and administrators. Ninety-eight percent of teachers indicated an increase in student enthusiasm and engagement. Eighty-nine percent said students



were more willing to stay on task (Smith & Sobel, 2010). Another study from 2005 comparing five years of data using California's STARS (Standardized Testing and Reporting System) showed the following:

- In 100% of reading assessments, the treatment group scored as well or better than the control group.
- In 92.5% of math assessments, students in treatment groups scored as well or significantly higher than the control groups.
- In 95% of the language assessments, treatment students scored as well or significantly higher than control groups.
- In 97.5% of spelling assessments, treatment students scored as well or significantly higher than control groups.
- In over 96% of all cases, treatment students scored as well or significantly higher than the control groups.
- In only 4% of all cases, control students scored significantly higher than treatment students.
- In 42 % of the cases, treatment students scored significantly higher in reading, math, language, and spelling (SEERS, 2005) (Smith & Sobel, 2010, p. 75).

According to the research shared in *Place and Community-Based Education in Schools*, schools that implement place-based education consistently have higher test scores than schools providing traditional curriculum (Smith & Sobel, 2010).

Anderson (2017) suggests we need place-based education to raise citizens who understand how everyone and everything is interconnected. This promotes civic engagement with the learning giving youth a more powerful voice.

Because place- and community-based education is closely allied with other innovations such as service learning, environmental education, and a form of pedagogy called authentic instruction, it is . . . possible to draw upon related research that points to the value of educational experiences situated beyond the classroom and that involve the application of concepts and skills in “real-world” settings. Combined, all of this research suggests that the adoption of place- and community-based educational approaches does in fact hold the promise of enhancing student engagement and achievement, and their sense of responsibility for the broader human and natural communities that surround them. (Smith & Sobel, 2010, p. 74)

Mapping may be a component of place-based education. Mapping is a way that students can know and better understand lands and communities. Maps may be personal, illustrate injustice and areas of concern, and reflect demographic information. Place-based education also provides a framework for science education by integrating scientific thinking with social and economic content. Learning requires collaboration, problem solving, and creative thinking. It removes boundaries that separate different areas of learning and moves to an integrated approach to learning (Anderson, 2017).

*A Forest Days Handbook* by Eliza Minnucci and Meghan Teachout is a practical and creative guide for designing school days outside. The authors present the forest as a classroom offering lessons of persistence, creative problem solving, and building self-confidence. Programs like this flourish through enthusiastic teachers as well as parent and community involvement. Best practices include establishing boundaries and then trusting kids, along with modeling play and curiosity for students. Challenges include skepticism, staffing, keeping students outfitted, site development and maintenance, and site impact (Minnucci & Teachout, 2018).

From my observation, they're getting more than what they're getting in the classroom. The math that they do out there—whether it's temperature, or measuring the height of the snow or a tree or adding this to that—and the reading, writing, science--it's off the charts. And in social studies the sense of community and responsibility and democracy—all of that is being met and then some. And the thing is, it sticks. It's happening in a very real-life situation for those kids. I could ask a kid, "What did you do four weeks ago up at Forest Friday?" and they can tell me word for word. It absolutely sticks. (Minnucci & Teachout, 2018, p. Appendix/15)

In summary, the literature reviewed shows that place-based programs have great potential for the academic and social-emotional success of students everywhere, especially in rural districts. While not all of the literature I reviewed was specifically from rural districts, the case studies I reviewed all had a rural theme including but not limited to the forestry project at Tillamook Middle School, the Kickapoo River Institute's wetland restoration, and the schools highlighted in *A Forest Days Handbook*.

My literature review supports my intent to research further the topic of place-based education by conducting a qualitative study of Mount Baker School District's place-based outdoor programs. My main focus will be students in grades K-6 who are or have been participants in the Connections Program. This program is a continuation of the Connections Program that started in fall 2020 during the start of the pandemic. A coalition of five community-based programs worked with sixth-grade students before they returned to school and continued to work with them on Wednesdays when school was not in-person. Because of the success of that program and the attention it received, Mount Baker School District was able to secure funding to continue working with students, this time not just sixth grade, but kindergarten

through sixth grade, and also to include more partners and more programmatic options. The Connections Program has been funded through the Washington State Legislature, thanks to our local legislators from Whatcom County. Our community-based partners have been organized through the Whatcom Environmental Coalition and include Camp Saturna, North Cascades Institute, Wild Whatcom, Common Threads, and the Nooksack Salmon Enhancement Association. They received \$640,000 from the Washington Legislature over a two-year period to work with Mount Baker and Blaine School Districts.

## **Chapter III**

### **Methodology**

The purpose of this study was to identify and analyze the extent to which place-based education, which is also referred to as outdoor education, influences students' well-being, including social-emotional and academic fulfillment. Findings from this study have the potential to help guide educational leaders in implementing sound place-based education learning for students. More specifically, the intent of the study was to highlight and guide school leaders in developing place-based opportunities for students in a rural setting that will help those students learn the interconnectedness of where we live and how that understanding relates to global issues. This study focused on the outdoor education program at Mount Baker School District that took place during the 2021-22 school year and continued in the 2022-23 school year. Surveys, interviews, and pre-existing data were used to identify the effectiveness of the Mount Baker School District program, as well as to provide direction for improving and bolstering the program to assist leaders in building an optimal framework for student learning using the resources within Mount Baker School District.

This chapter will describe the research design and the purpose of the design, including why it was appropriate for this study. The theoretical framework is a qualitative study using the place-based/outdoor education program in fourth through sixth grades as the bounded case for the study (Merriam & Tisdell, 2016). The research questions were articulated and aligned with the purpose of the study. Student participants were randomly selected with a balance of females and males who have participated in outdoor education. I will also describe the settings in which the outdoor education took place, as well as the instruments I used to collect data along with the procedures for data collection and analysis. I will share rationale for how data were analyzed to

show the effectiveness and needs for outdoor education in Mount Baker School District. Finally, I will discuss the limitations of the study as well as the subject positioning, including my role and relation to the population and topic.

### **Research Design and Theoretical Framework**

The research design is basic qualitative research that examines a bounded case study. Mount Baker School District was the focus for the research and where I collected all research data. My literature review included studies that used basic qualitative research and case studies. A study at the Kickapoo River Institute researched the impact of 100 days of interdisciplinary place-based learning showing significant positive impacts to the community while also resulting in participants' academic growth in science, social studies, reading, math, writing, sources of information, and literacy skills (Lewicki, 2000). Students enrolled at a school in Alaska who took on projects involving their community showed gains in academic scores over students who were not involved in the program (Loveland, 2003). Students at Tillamook Junior High School in Oregon worked with the logging industry to study trees and stumps that remained in logged areas. As demonstrated by data collected in the study, students boosted their math skills and ability to collaborate, while giving service to their community (Loveland, 2003). While these studies reported on academic growth, the contextual stories revealed positive outcomes that were not measured by tests but by completed projects, positive experiences, connecting with the community, and learning to collaborate and solve problems together.

A basic qualitative research study focuses on how people interpret experiences, construct their worlds, and find meaning in their experiences. A qualitative case study is the analysis of a bounded system. Merriam and Tisdale (2016) state the most defining characteristic is delimiting the case. There is choice in what is to be studied in a bounded case study (Merriam & Tisdell,

2016). “The ‘what’ is a bounded system (Smith, 1978), a single entity, a unit around which there are boundaries. You can ‘fence in’ what you are going to study” (Merriam & Tisdale, 2016, p, 36).

### **Research Questions**

My research included surveys and interviews with students, staff, and parents to identify the impact of the Mount Baker outdoor learning opportunities on student learning, engagement, and well-being. By studying other programs and the programs in Mount Baker, I hope to discover the leadership needed to implement and sustain successful place-based/outdoor learning programs. The following research questions guided my study:

- What characteristics of place-based learning distinguish this approach to learning?
- In what ways, if at all, does place-based learning enrich the learning experiences of students in a rural school setting?
- In what ways, if at all, is leadership in a place-based learning setting different from leadership in a setting that lacks a place-based focus?
- What do leaders in place-based learning settings do to support and sustain the success of their students?

### **Participants and Setting**

Figure one shows the Mount Baker program model for K-6. While I am not including kindergarten, first-grade, second-grade, and third-grade in my research study, it is important to note that they are an important component of the Connections Program because the learning at each grade level builds knowledge and experience for the learning in the succeeding grades. Kindergarten and first-grade students work with Common Threads on gardening and cooking. Second- and third-grade students study systems with Wild Whatcom. Fourth-grade students work

with the Salmon Project. Fifth-grade students learn during a camping experience at Camp Saturna. Sixth-grade students spend three days and two nights at Mountain School with the North Cascades Institute.

**Figure 1: Mount Baker School District Program Model for Place-Based Learning**

K	1st	2nd	3rd	4th	5th	6th
Common Threads	Common Threads	Wild Whatcom (EdVentures Program) 1 Trip in Fall 1 Trip in Spring	Wild Whatcom (EdVentures Program) 1 Trip in Fall 1 Trip in Spring	NSEA (Students for Salmon Program) Fall or Spring	Camp Saturna 2-day, day camps (consecutive days) Spring (May)	North Cascades Institute - Mountain School 3-day, 2-nights in Spring
Senses, cycles in nature, seasons (fall) Needs of life (spring)	Plant parts and Plant life Cycles (fall) Animal parts/Life cycle/Pollination (spring)	Scientific observations in nature Bug Log Investigation (Decomposition, biodiversity)	Ecosystems, Habitat, Native Plants and Animals, Survival	Ecosystems, watersheds, habitat, stewardship Inquiry based science, data collection	Regional foothills ecology, environmental science and outdoor recreation	Regional ecology, environmental science, outdoor recreation and public lands (National Park)
Based in existing school gardens at each of the three elementary schools	Based in existing school gardens at each of the three elementary schools	Off-campus. Additional Partners: Whatcom Land Trust, Whatcom County Parks	Off-campus. Additional Partners: Whatcom Land Trust, Whatcom County Parks	On and off-campus opportunities. Additional partners: Whatcom Land Trust, Whatcom County Parks	On site at Camp Saturna	Residential at North Cascades Environmental Learning Center

### Procedures and Data Collection

I have permission from the Mount Baker School District to use our student management platforms to identify students and track existing data. Skyward/Qmlative is used in Mount Baker School District to manage student information and data, and I have full access to those data, which include academic and social-emotional learning test data. I was also able to obtain contact information from this source to contact students, parents, and staff. I have created Google Docs Surveys for students, parents, and staff. I will not be sharing data or identifying students in my findings. Students will be referred to by their grade level when sharing testing data or responses from surveys and interviews.



I randomly selected up to three female and three male students from each grade level at each of three elementary schools to survey and interview. The parents of these students were only surveyed. I asked parents for informed consent for their participation but got a signed permission form for students as they are all under 18 years old, found in Appendix C. Several community-based organizations were essential to the place-based program. I planned to survey and interview up to 12 staff members from these organizations and up to 12 Mount Baker School District staff members who participated in the outdoor learning programs. From each of these participants I have obtained informed consent, using a form found in Appendix D.

Kindergarten and first-grade students work with Common Threads at their school. Each of our elementary schools has a garden that is used for this work. Second- and third-grade students participate at their schools but also take field trips to local Whatcom Land Trust sites. These student groups did not participate in this study; however, I interviewed and surveyed some staff members who work with these primary grades. Fourth-grade students, whose place-based program focuses on salmon, including habitat, ecosystems, and stewardship, do much of their learning at school as they have equipment and resources to raise salmon in their classrooms. They also take field trips to release the salmon when they are ready. I surveyed and interviewed them at their school. Fifth-grade students go to Camp Saturna in the spring. I surveyed them at school and then followed with an interview after they attend camp. Sixth grade **students** travel to the North Cascades Institute, which is located at the North Cascades Environmental Learning Center on the shores of Diablo Lake in North Cascades National Park. I surveyed these students at school and later interviewed some students after their experience at Mountain School.

## Data Analysis

Surveys for students, parents, and staff were created with Google Forms. I collected the data through forms and was able to look at individual as well as group results. While I have access to gender and grade-level information of participants, their names will not be revealed in this study. I created interview questions. I used a recording device to capture each interview and then transcribed that to a script which I was able to code for themes and relevance. “Each interview, set of field notes, and document needs identifying notations so that you can access them as needed in both the analysis and the write-up of your findings” (Merriam & Tisdell, 2016, p. 199). In addition, as a measure designed to support validity, I employed member checking (Merriam & Tisdell, 2016). Prior to coding I asked staff members to review their transcripts to ensure validity.

A second common strategy for ensuring internal validity or credibility is member checks. Also called respondent validation, the idea here is that you solicit feedback on your preliminary or emerging findings from some of the people that you interviewed. This is the single most important way of ruling out the possibility of misinterpreting the meaning of what participants say and do and the perspective they have on what is going on, as well as being an important way of identifying your own biases and misunderstanding of what you observed. (Maxwell, 2013, pp. 126–127)

The process involved in member checks is to take your preliminary analysis back to some of the participants and ask whether your interpretation “rings true.” Although you may have used different words (it is your interpretation, after all, but derived directly from their experience), participants should be able to recognize their experience in your interpretation or suggest some fine-tuning to better capture their perspectives. Some

writers suggest doing member checks throughout the course of the study. (Merriam & Tisdell, 2016, pp. 246-247)

I looked for themes in the transcripts and coded those themes for use in reporting my results.

### **Limitations and Subject Positioning**

There were external factors which could have impacted the results of this study including but not limited to the relationship with individual instructors to students, instructional skill, weather conditions during outdoor instruction, and the relationship of the researcher to participants. Since I am the superintendent of Mount Baker School District as well as the principal researcher for the proposed study, students and more likely staff could feel that they need to share positive experiences rather than reveal any negative perceptions. As the researcher it is my job to make people feel safe and comfortable sharing their true experiences.

I had to be aware of my own biases going into this research, so I consciously checked my own biases about outdoor education to make sure I collected and reported data objectively.

Analyzing data may present other ethical problems. Since the researcher is the primary instrument for data collection, data have been filtered through his or her particular theoretical position and biases. Deciding what is important—what should or should not be attended to when collecting and analyzing data—is almost always up to the investigator. Opportunities thus exist for excluding data contradictory to the investigator's views. Sometimes these biases are not readily apparent to the researcher. Nor are there practical guidelines for all the situations a researcher might face. (Merriam & Tisdell, 2016, p. 264)

## Summary

I conducted a qualitative research study using the place-based/outdoor education program in Mount Baker School District in fourth through sixth grades as the bounded case for the study (Merriam & Tisdell, 2016). My research design, including my choice of participants, setting, procedures, data collection, and data analysis, **aligns** with my research questions. As a result of my research, I aimed to discover the characteristics that distinguish place-based learning from other modes of learning. Surveys and interviews with children and adults were anticipated to tell me how, if at all, place-based learning enriches the experiences of students. Finally, I hoped to discover what leaders do to make place-based education a successful experience for students by increasing learning, engagement, and belonging.

## **Chapter IV**

### **Results/Outcomes**

The research for this qualitative bounded case study on place-based education in Mount Baker School District focused on fourth through sixth grades. My research was done mainly through interviews collecting the voices of 37 students including 16 fourth graders, 11 fifth graders, and 10 sixth graders. Twenty of those students were boys and 17 were girls. A total of nine district staff were interviewed including seven teachers and two administrators. Leaders at each of our Community-Based Organizations making up our Connections Program were interviewed including Emily Hie with Common Threads Farm, Licia Sahagun with Wild Whatcom, Nathan Zabel with the Nooksack Salmon Enhancement Association, Terry Carten with Camp Saturna, Jeff Gesen with the North Cascades Institute, and Ben Greene from the Whatcom Environmental Education Coalition. I also interviewed Representative Alicia Rule, who represents the 42<sup>nd</sup> District in Whatcom County on our state Legislature and secured funding for outdoor education in Mount Baker School District and Blaine School District, regarding her advocacy for our Connections Program.

### **Interview Questions**

I asked each student the following questions:

- Tell me about your experience learning outside.
- What did you learn about?
- How did what you are learning in your classroom prepare you to have a good experience learning outside?
- How do you think what you are learning and experiencing while learning outside will help you in the future?

- Do you think there should be more opportunities to learn outside? Why or why not?
- What do you like about learning outside?
- What don't you like about learning outside?
- How would you change or improve your experience?
- Is there anything else you want to share about your experience?

The questions I asked were aligned with my research questions, and I used this alignment to code, organize, and analyze the qualitative data I collected from student interviews. My first research question, “What characteristics of place-based learning distinguish this approach to learning?” is aligned to questions one, three, and four. My second question, “In what ways, if at all, does place-based learning enrich the learning experiences of students in a rural setting?” is aligned to questions one, two, three, four, and six. My third question, “In what ways, if at all, is leadership in a place-based setting different from leadership in a setting that lacks a place-based focus?” is aligned with questions three, four, and eight. My fourth question, “What do leaders in place-based learning settings do to support and sustain the success of their students?” is aligned with all of the questions.

I asked the following questions of staff including both Mount Baker School District staff and our Connections Program staff from Community Based Organization:

- Tell me about your experience with students learning outside.
- What learning occurred during the outdoor experience?
- How do you think learning outside impacted your students?
- Did you notice anything different about student engagement or interactions when you were teaching outside?

- Did your students make connections to the learning they have been doing in the classroom?
- What do you like about teaching outside?
- What are the challenges?
- Do you think there should be more opportunities for teaching and learning outside?
- If our district was going to further implement outdoor learning, what support would teachers need?
- In a perfect world, what would outdoor learning look like in Mount Baker School District?
- What else would you like to share?

These questions are aligned with my research questions. My first research question, “What characteristics of place-based learning distinguish this approach to learning?” is aligned to questions eight, nine, and ten. My second question, “In what ways, if at all, does place-based learning enrich the learning experiences of students in a rural setting?” is aligned to questions two, three, four, five, and six. My third question, “In what ways, if at all, is leadership in a place-based setting different from leadership in a setting that lacks a place-based focus?” is aligned with all of the questions. My fourth question, “What do leaders in place-based learning settings do to support and sustain the success of their students?” is aligned with all of the questions.

### **Surveys**

I sent surveys to the students I interviewed and their parents as well as Mount Baker School District staff. Very few surveys were returned, making these data insignificant for my study. The few surveys that were returned were positive and indicated favorable experiences with our Connections Program and a desire to increase the amount of place-based education in

Mount Baker School District. In retrospect, I wish I had not included surveys in my study.

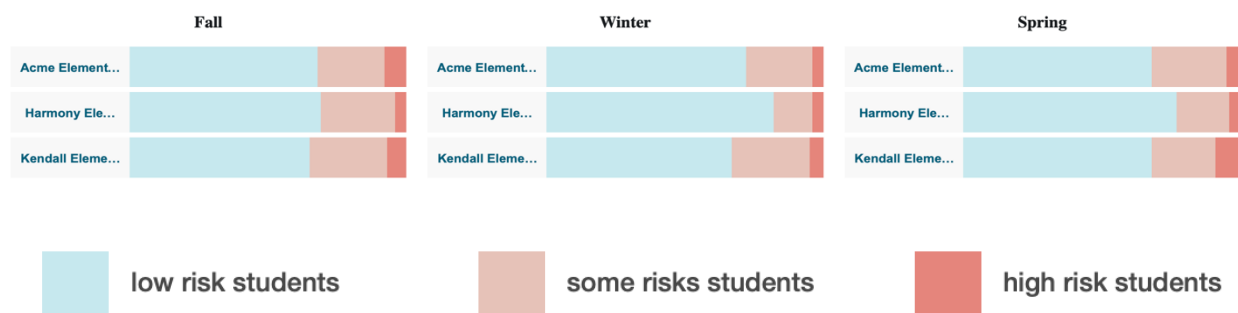
People get so many surveys that they tend to ignore them or put them off. The surveys were also similar to my interview questions, so once I started collecting interview data, the surveys felt like a duplication of my efforts.

### **Social Emotional Learning and Academic Data**

Impact data from our social-emotional learning assessment compares fall, winter, and spring scores that indicate the number of students who are low risk, have some risks, and are at high risk. The Children and Nature Network (2016) reports that Green Schoolyards at each elementary school, similar to Mount Baker School District’s Common Threads gardening program, can enhance mental health and well-being as well as social-emotional skill development. Furthermore, involvement in the gardens helps children build relationship skills and develop self-awareness and self-management (Children and Nature Network, 2016).

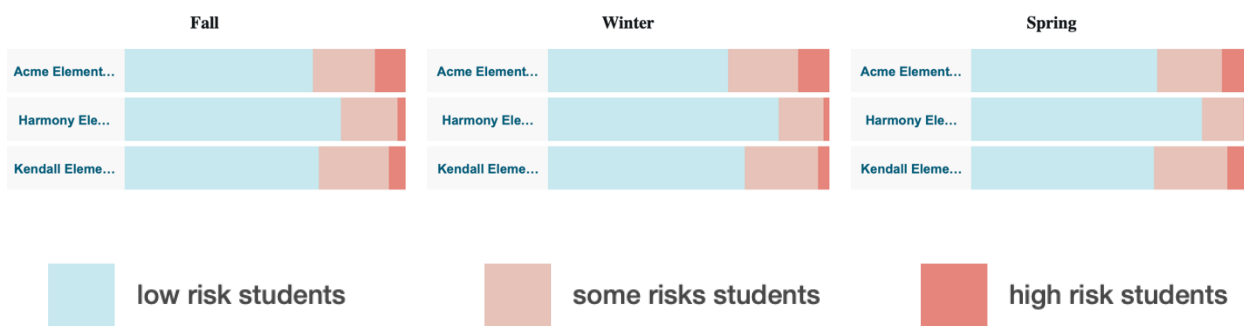
Mount Baker School District uses the SABERS assessment screener which is a component of the FastBridge assessment suite. Figures 2 and 3 show progress for grades four through six. SABERS is a tool completed by each child’s teacher. MySABERS is completed by each student. Students are shown as being low risk, having some risk, and being high risk.

**Figure 2: SABERS Teacher Perspective (Social Academic Emotional Behavior Risk Scale)**





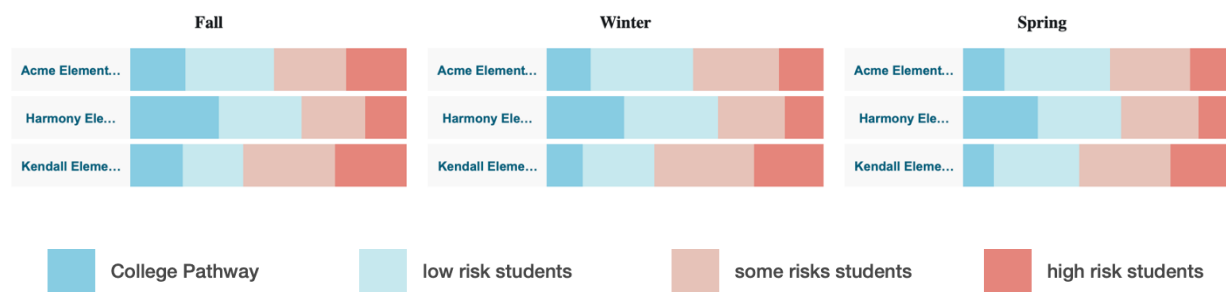
**Figure 3: MySABERS Student Perspective (Social Academic Emotional Behavior Risk Scale)**

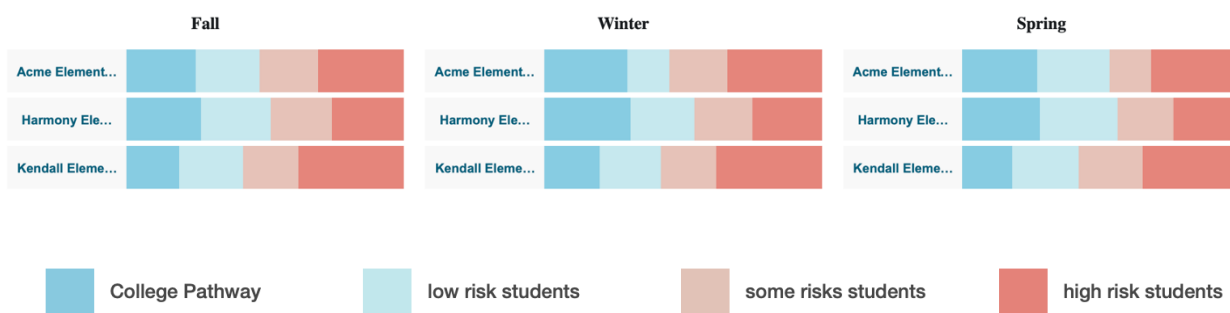


These are interesting data that could be related to place-based education, but many other factors could influence these scores including factors inside and outside the school walls. This might be more relevant and valid for a longitudinal study of the impacts of place-based learning on social-emotional outcomes.

The FastBridge assessment screener is given during the fall, winter, and spring to screen students for instructional needs and show progress throughout the year. Students are scored at college pathway, low risk, some risk, and high risk. A study at the Kickapoo River Institute showed significant growth in academics over a 100-day study (Lewicki, 2000). My study does not show significant growth as seen in Figures 4 and 5. Any decline or increase in scores would be difficult to attribute to place-based education because there are so many other factors that impact academic achievement. A longitudinal study using academic data might be more meaningful and valid as well as interesting.

**Figure 4: FastBridge aMath Scores**



**Figure 5: FastBridge aReading**

The most meaningful data for my research resulted from interviews with students and staff. The process of coding the transcripts from my interviews helped me manage the organization of the data under my four research questions:

- What characteristics of place-based learning distinguish this approach to learning?
- In what ways, if at all, does place-based learning enrich the learning experiences of students in a rural school setting?
- In what ways, if all, is leadership in a place-based learning setting different from leadership in a setting that lacks a place-based focus?
- What do leaders in placed-based learning settings do to support and sustain the success of their students?

My data will be presented under each research question. I am separating my data by grade levels that are aligned with specific experiences. My purpose for this is that there may be different perceptions from experiences from the different grade levels. Fourth-grade data are from experiences with the Nooksack Salmon Enhancement Association, fifth-grade data are from experiences with Camp Saturna, and sixth-grade data are from experiences with the North Cascades Institute. This structure may also show how the learning at each grade level builds each year with each different experience.

Fourth-grade students participating in the Nooksack Salmon Enhancement Association's program learned about ecosystems, watersheds, habitat, stewardship, inquiry-based science, and data collection. Kendall Elementary and Acme Elementary were involved in raising and releasing salmon. Learning occurred both on and off campus and included nearby Whatcom Land Trust properties as well as Whatcom County Parks.

Fifth-grade students spent two consecutive days at Camp Saturna learning about regional foothills ecology, environmental science, and outdoor recreation. Camp Saturna is within Mount Baker School District's boundaries on the shores of Silver Lake in Whatcom County. It is a 133-acre environmental camp and recreational retreat with breathtaking views in the foothills of the North Cascades.

Sixth-grade students spend two nights and three days at the North Cascades Institute also referred to as Mountain School. Traveling to the North Cascades Institute on Diablo Lake and near the Diablo Dam provides breathtaking views of the North Cascades. It is a majestic setting for students to learn about regional ecology, environmental science, outdoor recreation, and public lands.

**Research Question 1: What characteristics of place-based learning distinguish this approach to learning?**

***The Fourth-Grade Student Perspective***

Fourth-grade students from Kendall Elementary shared their thoughts about their experiences with outdoor learning during their work with the Salmon Project:

- I think it's better to learn outside than inside because you get more hands-on.

- We went on a field trip, and we let our salmon go. While we were waiting to do that, we cut blackberry bushes. Before the field trip, we went to a wetland. We learned about the clean waters and places that are polluted. We also learned about trees.
- We learned that cold water has more oxygen. The streams need native plants because invasive plants take over.
- The salmon field trip was the best. I named my fish Nemo.
- I think the last field trip I did wasn't better than the salmon one, but I think the salmon one is the best one I've been on. There's a Sasquatch one coming up. That one's fun
- It was a pretty good one because my dad was there too. I was pretty prepared to do it. He was happy that there was a field trip. This was our first field trip.

Fourth-grade students from Harmony Elementary shared their thoughts about their experiences with outdoor learning during their work with the Salmon Project:

- I like field trips outside because we can learn new stuff about nature. Like, we could learn cool facts that we've never heard before.
- Mostly we learned about the lifecycle of salmon. Wherever we're learning outside, it's more about animals or plants. We learned a lot about living organisms and how things help each other grow or live.
- It was hailing and stormy. It was not a good day because we got soaked. It was just very hard. And I feel like they should have a plan B if they do want to do that. We needed to have an indoor Plan B. I do remember the bugs. We looked at them in the water.

- It was not the best weather, but for most of them, it was really good weather. I feel like it helped a lot with the learning because it's kind of easier to see it instead of just visualizing it in your mind,
- The first thing we did was we split up. And of course, we brought our backpacks. We set our backpacks in the back of a truck and went to our groups. We each got a clipboard, and we kept the clipboard most of the time.
- We went to the river. It's like we walked there. It was cool because it took more time to ride a bus than it did to walk there.
- It was pretty good. It drizzled on us a little bit but it was supposed to, so I think it was pretty good.

Fourth-grade students from Acme Elementary shared their thoughts about their experiences with outdoor learning during their work with the Salmon Project:

- We released some salmon into the creek on our field trip. We also went to the bay for another field trip. There we tried to find different wildlife. We've also done other activities outside. I can't remember what they were but there were some activities we have done.
- There are things that we do outside just because we have more things to do in the classroom such as ELA and math and stuff. During summer school we spent half the time outside.
- I have done Wild Whatcom and the garden. I did wildlife for a week when I did summer school, so I did a lot of outside learning then

- Well, we did like learning outside. We learned about the different animals at Padilla Bay, like the tiny little crabs and the little worms. We were learning about the different body parts of the salmon and their lifecycle.
- We pulled real weeds while we waited for our name to be called to release the salmon. There was a little tube, and they went down, and we got to say our poem and wish them a good life.
- We had different stations when we released salmon. One was for identifying different plants, trying to find them and their native properties like if they're native or invasive. And then we had another station which was water quality, and we got to mix different chemicals. It was really fun. Then we went over to the insects station, and we got to learn all about insects.
- At the bay we went outside for a little scavenger hunt, trying to find different sea animals, like crabs. There were worms and all types of sea animals. Then we went back to the hut to eat lunch, and then we went onto the bus to go to the Research Center, the actual research center. Then we got to go into different rooms and one room was you get you got to see and touch see animals like sea urchins.
- When we learn outdoors the air is fresher. It is better than inside. And there's a lot more space and it's green. In the winter it's white everywhere. You can dig those snow tunnels and it's really fun. My dad wants to go hiking up the Twin Sisters.

From the fourth-grade students' perspectives, place-based learning gets them outside in the fresh air. Learning became real as they raised salmon and then released them making the lifecycle of the salmon meaningful to them. They realized their connection with their local streams and how being stewards of our natural resources is so important to the future of salmon

and the health of our environment. They know more about their surrounding environment in Mount Baker and Whatcom County. Directly interacting with the environment made learning real to them.

### ***The Fourth-Grade Teachers' Perspectives***

One of the fourth-grade teachers spoke to the uniqueness and benefits of working with community-based organizations such as the Nooksack Salmon Enhancement Association.

The way they have that set up is awesome. It's structured, and they know what they're doing. You know, the kids learned a lot about macroinvertebrates and how they're important. They learned about healthy streams, and how that's important for the salmon. You know, looking at the environment around the stream, they learn what they can do to help it, so having that community component where they went in there taking out the dead grass and pulling up weeds. The chemistry part allows them to use experiments and see what they're looking for in the water, temperature, and clearness. So, it's a lot of little things as well as helping to connect to what we're doing in class. It is learning in another way.

Another fourth-grade teacher expressed her thoughts on place-based learning and the Connections Program in Mount Baker School District.

I've always been involved with outdoor education, and I love the connections that we have here. Everything from the garden on-site to the field trips, and different places, and I love the way it builds following the NGSS standards. It's just so appropriate, and it's just extremely important. It's something I've always been involved in and enjoy.

A fourth-grade teacher with one of the largest class sizes in our District was surprised by the motivation and good behavior when learning outside.

I was pulling groups a few at a time to release their salmon. and the rest of them got to cut back blackberry bushes. This is something that they would not do at home for their parents. They were doing this with gusto and having so much fun because it was outside and out of the norm. Even when we went over to the Harrison Nature Reserve to do some learning before we went on the trip, they were very engaged. The students worked at stations. We didn't have a single behavior incident the whole day. Wow, that was amazing for a class of 31 students. It was a cool thing!

Nathan Zabel from the Nooksack Salmon Enhancement Association points out the unique opportunities including teachable moments that learning outside provides as well as the connections that students make to the world around them. It is an experience that students remember into their adulthood.

Our programs allow students the opportunity to collaborate. It allows students the opportunity to take advantage of their multiple learning styles. And, it allows them the opportunity to just be curious about something and to discover it further. There are often what we call teachable moments that take place, and there were so many of those that happened with the Connections program at Kendall in the Mount Baker School District. There are so many of those that happen with fourth graders that are participating in our student program. I don't think you get that as much in the classroom. You don't get a bald eagle flying over, or you don't get to hear the song of swans as they're migrating through this region. You don't get to hear the deafening call of frogs in the springtime. Just using nature as an outdoor classroom can be so powerful and can be such an important way to connect to middle schoolers or fourth graders or preschoolers or whatever age group it is. It can be such an amazing way to connect us all as human beings and to help us work



towards this goal that the outdoors is for everyone. For us as an organization, we want people to know that salmon are important for everyone. It's amazing to connect with students years down the road because we've been running our program for over 20 years. We're starting to see people apply for our open positions, whether they're internship positions or full-time staff who remember being on the field trip, or they remember when they got to release a baby salmon into a creek when they were in elementary school. It sticks with them. Then they come back and they find us again. They want to work for us. Those stories are what motivates us to reach students in multiple different ways, times, and places. (N. Zabel, personal communication May 3, 2023)

### *The Fifth-Grade Student Perspective*

Fifth-grade students from Kendall Elementary shared their thoughts about their experiences with outdoor learning at Camp Saturna:

- It was really fun to walk around. Our teachers were nice. They shared a lot of facts. And even though it was raining, it was still really fun to learn outside. It was very interesting to learn all the facts. There were a lot of projects there. Everyone was learning, and we got to speak up and talk about the different types of plants and stuff.
- The people there were nice. Even if we weren't paying attention, they'd just try and pull us in. Like, showing us a cool fact. We were not paying attention and talking to a friend, they would walk up to us and say, hey, this tree is blah, blah, blah. And it's cool because of blah, blah, blah. I feel like that was cool.
- I feel like learning outside makes it a lot more fun because you get to be active while learning.

Fifth-grade students from Harmony Elementary shared their thoughts about their experiences with outdoor learning at Camp Saturna:

- I like to learn about different plants and different animals. We got to learn about the water cycle and how healthy the water is. We got to participate and then we got to teach others about it too.
- I made it to the top ones and almost made it up four other times.
- Being able to feel and see in person the things you learn. We went on the trails and learned about vine maples and stuff. You can see how they went into the ground and connected. So that helps you memorize what they were.
- I honestly really enjoyed it because the weather was nice. I just like being outdoors more. I like it more than being inside. And also learned about how to identify trees and how to identify plants since my grandparents are super big for nature stuff. I can kind of understand what they're talking about more.

Fifth-grade students from Kendall Elementary shared their thoughts about their experiences with outdoor learning at Camp Saturna.

- We got to learn a lot about like different trees and I think it was really good for our health to get outside because we learned about different trees. There was a tree I forget what it was called, but it does like somersaults as it grows.
- I wasn't very good at archery, but on the second day, my mom also came which was pretty cool.
- I learned about what plants were like in the wilderness. The teacher told us about the plants and then another group would come up and we would teach them about the plants, and it was like really cool. Some people got very high on the rock wall. Some

people didn't get very high, but it was still really fun. I'm pretty sure everybody likes that.

Fifth-grade students from Acme Elementary shared their thoughts about their experiences with outdoor learning at Camp Saturna:

- I didn't know it was a thing. I didn't know that it was on Silver Lake Road. I didn't know that it was an old Boy Scouts camp. I learned that they rent it out to families for weddings and stuff. I have been talking to my mom about going.
- My family goes camping a lot, and it's really fun. Every Fourth of July we go camping and sometimes on my birthday and stuff. One year we took our RV and went to Yellowstone. We got to see a lot of wildlife and stuff. I recorded a lot of stuff on my sketchbook that I brought.
- I have a lot of fun learning outside because it's nice to be in nature. It's really fun to be in the sun hanging out with friends and learning, about anything.
- I love being outside when we are learning because then it gives me fresh air, and it's a lot better than sitting down. You get to walk around a lot. I liked rock climbing. I thought that was fun.

Fifth-grade students perceived place-based learning as more fun and active than learning in the classroom. They enjoyed the weather, fresh air, and the ability to move around. They not only learned about environmental science, but they had opportunities to get out of their comfort zone with rock climbing and archery. I heard a wonderment and appreciation for a place that is literally in the backyard of Mount Baker School District.

### ***The Fifth-Grade Teachers' Perspective***

I interviewed one fifth-grade teacher who is very supportive of the Connections Program and hopes it continues. When I asked him about the impact on students, he said, “The learning that occurred at Camp Saturna was a lot around trust and taking risks in a safe environment. There is a tie-in to standards, but it is hard to quantify the trust and community that students built.”

Terry Carten from Camp Saturna shared his perspective on what is special about outdoor learning at Camp Saturna.

When Students are learning by doing with hands-on engagement, they develop a greater appreciation for learning. First-hand experience helps them learn a lot of concepts that at this age group can be pretty abstract or conceptual in class, but when they get out here, they come to a better understanding. They learned about how water moves down, so when you see it and hear it gives them understanding. They can use all of their senses when they are outside. In class, they might hear about something and see pictures, but out here they experience it. (T. Carten, personal communication May 18, 2023)

### ***The Sixth-Grade Student Perspective***

Sixth-grade students from Acme Elementary shared their thoughts about their experiences with outdoor learning at North Cascades Institute also known as Mountain School:

- Mountain School made good memories. I think it was really fun because you got to go on hikes, but they were not non-stop. We took breaks. And that's what made it quite enjoyable. That's what I like about hiking honestly. I hate non-stop hiking that is uphill. When there was a lot of uphill we stopped to rest every five minutes and have a snack break or something. It felt like a very inclusive activity. If someone wasn't

able to do it, there'd be a different activity they would have ready for them. The food was vegetarian and some vegan, which was nice.

- I have always loved the outdoors, so it helps me focus. It is really helpful and beneficial for my learning experience.
- We got to go to the waterfalls and the Diablo Dam. It was amazing because it was so different.
- Mountain School was also a great experience because we got to like and just be ourselves there. While I'm at school, sometimes it feels like we're kind of stuck. I feel like that at Mountain School, we could do a lot more things that we couldn't do at school. It felt a lot more freeing.
- Mountain School was a great experience because we got to learn about so many different things that we wouldn't normally do at school. We learned some random facts, like different types of trees, the markings on the trees, or how they decompose. Like all the things that they taught just kind of came together.

Sixth-grade students from Harmony Elementary shared their thoughts about their experiences with outdoor learning at North Cascades Institute, also known as Mountain School.

- I feel like being outside just feels more surreal because you walk around and experience it more. It is like real life instead of having a paper on your desk or looking at your computer. You can see it, and you can touch it. The teachers are really good there. They help you learn about all the details you want to know about a specific plant or animal.
- In Mountain School, it is really fun. Our trail group person taught us how to play games. Also, at the same time, we were learning things while we were playing the

games, which I thought was fun. She showed us some plants, trees, and leaves that we can eat. She showed us how you can tell the types of leaves. I did enjoy learning new things. I enjoy hiking now more because I like it better now that I know more and got to experience it. I do remember I used to be afraid of seeing a bear or something out in the woods. But during Mountain School when we were up on the hills, we didn't see anything, so I'm not that scared of that anymore. The only thing we saw was a deer, which was cool.

- It was cool getting to just hang out with friends in our cabin. It felt like kind of a first step forward toward becoming more independent.

Sixth-grade students from Kendall Elementary shared their thoughts about their experiences with outdoor learning at North Cascades Institute, also known as Mountain School.

- After breakfast, we would all go into our trail groups. Our trail leaders would tell us what we were going to do, so they would take us on trails and stuff. They took us on this one trail that went all the way up. We got to hike at night too. We started talking about all the different types of animals, and the nocturnal ones that come out at night. We played games and stuff. We played this game about a bat. Which is a nocturnal animal, and then we also played a game about a deer. It was a lot of fun.
- Camp Saturna was fun last year. My favorite thing was the rock wall. Archery was cool too. It was pretty similar to Mountain School like the way we learned about stuff and the activities we did.
- I think it's really important. I like learning about outdoor stuff because then when I'm on a hike, I know what that tree is, or I know what can be in that stream. I know what I shouldn't drink or eat. I also think that it's good because some kids don't get out

much. I know some of my friends were saying that it was cool to be out. We can do more things on our own. I think that was a big step for becoming more independent because that was two days. Two nights and three days we were away from our homes and school. That was pretty cool.

- It was fun. It's probably the longest I've ever been outside and the longest hike I've ever done. And, I liked it. It was fun. It's another chance to learn. It is just way more fun because you're outdoors going up hills. My favorite hike was this four-hour one. We hiked to the waterfall. You get up there and we eat lunch up there. The water and the waterfall misted us and it was really good.
- We learned a lot about plants and the animals that are there. Each time we would see a plant that we learned about we would identify it. We made games out of it.
- Mountain School was fun. We learned a lot about the plants. We did the hikes, and we got to learn about plants. We also learned about outside stuff, like predators and stuff. That was very fun.
- We've learned outside a little bit before but not as much as Mountain School. It was very fun because I like sitting outside instead of being inside all the time.

### ***The Sixth-Grade Teachers' Perspective***

I interviewed two sixth-grade teachers who shared what they think is valuable about outdoor learning.

- Outdoor learning at Mountain School moves students toward being a little independent from home. For a lot of these kids, especially coming off the heels of COVID, they haven't spent a night away from their parents. That independence was super fun to see them experience that we can help quite a bit. Saturday night we're

laughing pretty hard. Everything from the simple things like the meals to the learning of what they did in their trail groups. The teacher had a lot of expertise about native plants and which plants are edible. My kids probably ate 10 different things out in the forest. It was fabulous. They had no idea that they can eat a nettle stick. Everything from the geology to the dam to erosion and watersheds to the water cycle was learned during this trip. In the classroom, we can teach them from slides and bring down branches. The difference between a Doug Fir, a Cedar, a Hemlock, and an Alder doesn't stick as well unless you're out there and you're looking at it in the forest. You're looking up in a tree, or you're seeing old growth, or you're seeing new growth, or you're tasting maple saplings and sprouts. It's a whole different level of experiential and that makes it real. It's night and day to me. If I could teach outside three days a week, I seriously would.

- It was just so powerful to see kids experience outdoor learning at Mountain School. My kids said they want to go back. One student said, "I would stay a whole week if I could." One of the girls said that it was the best day of her entire life and so much fun because everybody is happy. She said the people there are so nice. Students learned a lot and enjoyed being able to be outside. It was a very positive experience.

An administrator accompanied Kendall Elementary to Mountain School and shared his perspective on learning at Mountain School.

There is a lot of learning that goes on at Mountain School about regional ecology and environmental science. I think the bigger picture is they do a really good job at North Cascades Institute with connectedness and getting kids to understand their impact on the world. They use a lot of symbols and metaphors for that with water. Because really, it is



important to know that you can impact the world. I am not sure how much content they retain from Mountain School, but I feel like the kids do retain that global understanding of their place in the world.

Jeff Giesen from North Cascades Institute has worked in outdoor programs for many years and has been managing the North Cascades Institute for the past has been a leader along with the Whatcom Environmental Education Coalition and all of our Community-Based Organizations in partnering with Mount Baker to give our students outdoor connections to what they are learning in school (J. Giesen, personal communication, May 24, 2023).

### ***Summary***

As a result of my research and experience with our Connections Program, I have concluded that the following characteristics of place-based learning distinguish this approach to learning:

- Hands-on experiences in a natural setting
- Connections to real-life experiences and learning
- Partnership with schools and community-based organizations
- Connections to the local and global environment
- Explorations and fun incorporated with learning
- Integration of science standards and other core subjects for outdoor experiences
- A willingness to take risks
- Stewardship supports a healthier environment for all ecosystems.
- Classroom learning is connected to outdoor learning.
- Love and respect of place.

I think outside, you're more inclined to hear from almost every student. There are going to be students who are going to speak for whatever reason outside more than they're going to speak inside. The group sizes are different too at Outdoor School. But there's a huge difference between looking at a picture of fern inside or holding our phone outside. I think that's a big piece of it. I think they can live the experience and see the deer or hear the birds that's far different than sitting in the classroom. (N. Perigo, personal communication May 19, 2023)

**Research Question 2: In what ways, if at all, does place-based learning enrich the learning experiences of students in a rural school setting?**

Mount Baker School District is a rural school district. It has an abundance of natural resources within its boundaries including forests, lakes, rivers, streams, and Mount Baker itself including the popular Mount Baker Ski Area. While it is a recreational destination that attracts people from all over, many students who attend our schools rarely access outdoor opportunities that are close by. Acme Elementary, Harmony Elementary, and Kendall Elementary have been involved with the Connections Program partnering with community-based organizations to align classroom learning and outdoor learning experiences with Next Generation Science Standards and to promote community connections giving all students access to place-based education. Promoting stewardship and care for our air, lands, and waterways is an important component of the program.

Acme Elementary is in Acme, Washington, and is considered part of the Southfork Valley in East Whatcom County. The 2022-23 school year enrollment was 202 students with 48% identified as low-income.

Harmony Elementary is in Bellingham, Washington, near Deming, Washington. The 2022-23 school year enrollment was 307 students with 43.6% identified as low-income.

Kendall Elementary is located in Maple Falls, Washington, and is considered part of the Northfork Valley. The 2022-23 school year enrollment was 321 with 74.8% identified as low-income.

Due to poverty and lack of funds for place-based education, rural students who live near the perfect outdoor surroundings for learning may have less access than students from cities with a higher tax base and resources to provide opportunities to learn outside. The Whatcom Environmental Education Coalition tackled this issue by discovering the gap in opportunities and bringing schools and community-based organizations together to provide more access to outdoor learning.

There is a gap between rural and city schools. Schools within districts were getting different experiences, so we have addressed that through a different model of partnership which involves more coordination like the Connections Program. It is at its heart an equity initiative from my perspective. I hope to continue to facilitate collective meetings to support the collaboratives to continue and maintain their work. The school feedback indicates that the experiences have impacted kids. These types of experiences can transform how administrators and teachers. (B. Green, personal communication, May 10, 2023)

A fourth-grade teacher talked about the different levels of knowledge and experiences students have even though they all live and go to school in a rural setting.

They learned a lot, and we have a wide variety of kids in the classroom. Some students are very familiar with being outside for fishing and different outdoor activities. Then, we

have some that have absolutely no experience. All students learned everything from the physical structure to the importance of what kind of habitat they live in. They know about life cycles now and what their part is in the environment.

Teachers appreciate getting to see students in a different setting and building positive relationships with students.

I get to see the students in a whole new light. You know, when you're in the classroom and you have your standard and learning target for that day. You still have those things when you are outside, but you get to see them interacting differently with you and each other. It naturally brings out their background knowledge and the way that you will find out the kinds of things they do at home such as gardening or fishing. It is a whole new level of getting to know kids and see how they function in a place that might be not as stressful.

A sixth-grade teacher shared what she believes Mountain School meant to her students.

I think equity is important, and this experience gave all students access to new experiences and learning. I know kids everywhere are impacted by trauma and poverty, but I feel like we have a pretty significant population for sure. Just to be able to give them that opportunity was impactful. I observed a couple of girls walk into the lodge the first night and I could tell they were in awe. One of them said, "I feel rich." It was just such a lovely moment. It was beautiful to be able to provide that for them.

Mount Baker School Districts Executive Director of Teaching and Learning, Bridget Rossman, has led and embraced the partnership with community-based organizations that launched the Connections Program. She speaks to the benefits for students as well as our District.

Every conversation or contact I have with the Connections Group emphasizes the impact on students. I don't think we can necessarily quantify at this moment, but I think that opportunity to learn about what's around you and learn with others and accel probably impacts the retention of students in the school district, because of those opportunities. And then the academic growth will come with time. I think that they begin to see how things connect. Students understand it's not just about them, but it's about what they are learning and how to take that further. (B. Rossman, personal communication May 19, 2023)

### **Summary**

My many conversations with students and staff members led me to the conclusion that first and foremost, place-based learning and specifically our Connections program has enriched students' learning experience by providing equity and access to all of our students. Students came to the experience with a variety of experiences and background knowledge about our environment and how they impact it. Some students could be considered avid outdoors people while others have never been to the lakes, rivers, or Mount Baker even though they are a short distance from these beautiful places.

Students' experiences were further enriched by the in-the-moment, real-life experiences that place-based learning provides. They were able to see, smell, hear, and taste the environment they were learning about first-hand. They know have a connection to their surroundings and know that their choices impact the air, streams, rivers, lakes, and forests. They will be better stewards of our community and world because they understand and have experienced their connection to lifecycles and the health of the environment.

Mount Baker School District students experienced this enrichment because of leaders including their classroom teachers, principals, and the Executive Director of Teaching and Learning who embraced partnerships with our community-based organizations. The expertise and planning for rich learning experiences of the staff at Common Threads, Wild Whatcom, Nooksack Salmon Enhancement Association, Camp Saturna, the North Cascades Institute, and Whatcom Environmental Education Coalition brought learning alive for our students in fun and meaningful ways. Students will remember these experiences for years to come.

**Research Question 3: In what ways, if at all, is leadership in a place-based setting different from leadership in a setting that lacks a place-based focus?**

The themes that emerged from my conversations with leaders were passion, engagement, commitment, funding, support to teachers and staff, communication, and collaboration.

During my interviews, I asked the community-based organization leaders what kind of leadership in school districts made outdoor learning more successful and sustainable.

It is important to get teachers engaged because that makes the learning out here more successful. Funding is always a challenge, so that takes a commitment. What I appreciate about Mount Baker School District is the strong level of buy-in from administrators. This makes it easier to have successful experiences because teachers are more prepared and engaged in the activities. (T. Carten, personal communication, May 18, 2023)

Jeff Giesen shared that leadership at all levels in a school district needs to be on board. Once he worked with a school district where one principal refused to work with him. For district-wide equitable experiences, the Superintendent needs to be supportive as well as set expectations. (J. Giesen, personal communication, May 24, 2023)

Nathan Zabel expressed gratitude for the Mount Baker School District.

I'm just grateful for the Mount Baker School District. They've always been such a gem to work with whether it's teachers at the three elementary schools or the support from the Connections Program was huge. We started that Connections Program really with two school districts, Mount Baker and Blaine. It could have easily fallen off after the pandemic when everything went back to normal. Mount Baker's continued to prioritize outdoor learning. I appreciate the traction that's happened and I'm excited to see how it hopefully grows. (N. Zabel, personal communication, May 3, 2023)

Wild Whatcom's leader, Licia Sahagun, said it is helpful when district staff meets to collaborate and find time to have teachers participate in professional learning. (L. Sahagun, personal communication, May 24, 2023)

Emily Hie stated that teachers could benefit from training on risk assessment because you have to be able to weigh the environmental risks against the benefits. Leaders can support this training to make outdoor learning more accessible and safe for all (E. Hie, personal communication, May 15, 2023).

Career Technical Education Director Todd Rightmire likes the idea of more consistent outdoor education in elementary school as well as science. If students become involved and interested early, they are more likely to engage in this kind of learning and work in the future. There are plenty of opportunities through CTE and FFA for students to continue on environmental pathways in high school. (T. Rightmire, personal communication, May 24, 2023)

Representative Alicia Rule from the 42<sup>nd</sup> Legislative District has been a strong advocate for outdoor education in Mount Baker School District. "We did get it put in statute, and you know what that means. This year as we're readjusting everything, many things didn't get funded.

We protected it and that was a worthwhile fight.” She has a vision where every child in every grade has some of their experience outdoors.

Outdoors feels far away but it's just a short walk across the street and you're in the magic of the woods. I love that, and then I think at sixth grade or so that an outdoor camp experience is really important, not only learning critical content, but for separating and figuring out who they are as human beings. Kids learn so much during that period time. This tests better than if they had stayed in the classroom. (A. Rule, personal communication, May 24, 2023)

### **Summary**

Successful and sustainable place-based education requires leadership that is equity-based, passionate, collaborative, committed, creative, organized, and supportive of teachers and the training they need. Doing anything outdoors requires risks and investments to make sure students and staff have what they need for outdoor learning which can be unpredictable regarding weather and conditions.

The Connections Program in Mount Baker School District has provided place-based learning for all students in grades kindergarten through sixth grade. Before this program, only certain schools and students were able to access these experiences because they were funded by parents and Parent Teacher Organizations. Now our state Legislature funds the program thanks to Representative Alicia Rule. We have a supportive coalition of community-based organizations that supports students and staff by providing expertise for outdoor experiences and supports our efforts to tie this learning to the classroom to meet Next Generation Science Standards as well as promote good citizenship and stewardship of our environment. The collaboration between these



organizations and our District leaders and schools is key to sustaining and growing these programs.

**Research Question 4: What do leaders in place-based learning settings do to support and sustain the success of their students?**

The themes that emerged from my conversations with teachers and administrators included planning, supporting, and funding as well as having a vision for growth and sustainability in the future. I addressed the need to plan, support, and fund place-based education under the prior research questions about what sets leadership for outdoor learning apart.

My favorite question that I asked was, "In a perfect world, what would outdoor learning look like in Mount Baker School District?" The theme that emerged was to provide experiences at every grade level matched with the curriculum. Service and stewardship were the other things that people envisioned for Mount Baker School District. As a leader who is passionate about place-based learning, my dream is to provide more place-based learning that is even better connected to standards and learning in the classroom throughout the year. Experiences and learning should continue to build each year with students ending their high school careers with a community project that supports our environment and provides equitable access to our lands and waterways for everyone in our community. Mount Baker School District will provide meaningful and engaging learning that makes our community and the world around us a better place.

Mount Baker School District staff and Community-Based Organization staff shared similar thoughts on what place-based learning could look like for our students.

- Mount Baker should have more of the same that is happening in the Connections Program (4<sup>th</sup> Grade Teacher)

- “I imagine as kids get into high school, they can start doing outdoor experiences that give them access and exposure to things that could potentially be jobs for them” (A. Rule, personal communication, May 24, 2023))
- “Our vision moving forward is being able to reach more students, shifting away from Bellingham, and moving to the county schools. Along with our other Connections partners, we want students to have experiences at every grade-level building to residential experiences when they are older.” (L Sahagun, personal communication, May 24, 2023))
- The Career Technical Education Director, Todd Rightmire, described a program that involved students at every grade level with older students teaching and supporting younger students. Through the years, he has seen schools throughout the state implement similar programs. (T. Rightmire, personal communication, May 25, 2023)
- Jeff Giesen from North Cascades Institute believes a lot of innovative things could be developed tied to outdoor learning and the Next Generation State Standards. Playgrounds could be transformed and outdoor experiences could be expanded bringing them even closer to schools. (J. Giesen, personal communication, May 24, 2023)
- Terry Carten from Camp Saturna believes there could be different opportunities for students post-high school whether it is going into trades or pursuing more education in environmental science. Developing interest and engagement is important. “I think it is important that we continue to do what we are doing with Connections leading to more opportunities as students get older.” (T. Carten, personal communication, May 18, 2023 )

- Bridget Rossman, Executive Director of Teaching and Learning in Mount Baker School District, envisions a well-designed and engaging kindergarten through 12th grade continuum of the what and why that develops an understanding of access points available to everyone. An integrated curriculum could be expanded with an emphasis on science. (B. Rossman, personal communication, May 19, 2023)
- Nick Perigo, Executive Director of Human Resources and Operations and former Kendall Elementary Principal, has attended Mountain School many times throughout his career. He expressed a vision to have more service learning as part of the Connections Program. (N. Perigo, personal communication, May 19, 2023)
- Ben Greene, who leads the Whatcom Environmental Education Coalition, believes that community engagement is really important and that outside learning gives students rich and memorable experiences. He appreciates that Mount Baker School District and the Connections Program are willing to be champions of this work and is excited about the possibility of future growth. (B. Greene, personal communication, May 10, 2023)
- A fourth-grade teacher expressed a desire to go out of the box and flip things. “We could have a magnet school where everybody could incorporate outdoor learning, so everything is interwoven.”
- A sixth-grade teacher shared the vision of a year-round program with cooking and outdoor experiences. She wants students to get to know the outdoors.
- A sixth-grade teacher shared that she brings local businesses and organizations into her classroom and envisions including logging and forestry. She also expressed a

desire to get kids to the ocean. She has a desire to add experiences to the Connections Program.

- A fourth-grade teacher shared her desire to build on the Connections Program.

I am a huge believer as I think any teacher should be that if you ever do a field trip or anything like that, it should directly relate to things you're learning in the classroom. I do think that it was cool to have the fish here and to be learning about them and stuff like that. I think that that should always be happening, so I would love to continue to see partnerships with community organizations. To make the curriculum integrate into social studies and learning about the Coast Salish tribes and stuff like that. We could connect to all sorts of things where community members are seeing that schools are involved in the community. I think it would be cool if there could be a set of learning experiences every year. This is what that grade level is doing, and it's continuing to work with partners. At each grade level, everyone would know what is happening including students, teachers, parents, and the community.

- A fourth-grade teacher shared that they would like to have two field trips per grade level each year with structured activities to build on the learning in the classroom. Mini-units would be helpful and build more connections to outdoor learning.

### **Summary**

To sustain and grow a viable place-based learning district-wide, there is a need for partnership and collaboration between the School District and the Community-Based Organizations. A component of that collaboration needs to involve creating a vision and strategic plan around that vision to ensure the desired growth comes to fruition. As a leader who aspires to

build on place-based learning in a rural school district, I need to hear all voices regarding learning, experiences, needs, dreams and desires to grow a greater connection to what students are learning and doing to the community and world.

## Chapter V

### Discussion, Conclusions, and Recommendations

I employed a qualitative, bounded research study (Merriam & Tisdell, 2016) to identify and analyze the impact of place-based learning for students in fourth, fifth, and sixth grades, all of whom participated in the Connections Program, which provides place-based/outdoor learning for all kindergarten through sixth-grade students in partnership with community-based organizations in Mount Baker School District. In the development of this dissertation, I examined the leadership and essential components needed for place-based education to have a meaningful and lasting positive impact on students' lives through a review of the literature and a collection of student and staff voices regarding their experiences with place-based learning in the Connections Program. I considered the social-emotional and academic outcomes through analysis of the interviews as well as testing data collected by Mount Baker staff through established assessment systems that screen and monitor social-emotional learning, reading, and math impacts.

My literature review indicated that there is evidence that environmental education, which could be a significant component of place-based education, contributes to several key outcomes for youth (Demarest, 2020; Getting Smart, 2022; Lewicki, 2000; Loveland, 2003; Metzger, 2013; Smith & Sobel, 2010). Extant research shows positive outcomes across a range of impacts including environmental knowledge, academic achievement, critical thinking, civic engagement, equity, and personal growth. However, existing research does not address what leadership, if any, may be associated with place-based learning. My research identified what leadership is needed to make place-based education sustainable and systematic.

My research was guided by the following questions:

- What characteristics of place-based learning distinguish this approach to learning?
- In what ways, if at all, does place-based learning enrich the learning experiences of students in a rural school setting?
- In what ways, if all, is leadership in a place-based learning setting different from leadership in a setting that lacks a place-based focus?
- What do leaders in placed-based learning settings do to support and sustain the success of their students?

### Summary of Findings

Table 1 is a summary of the themes that emerged from the 52 interviews I completed with students, Mount Baker School District staff, and community-based organizations staff.

**Table 1: Summary of themes that emerged in interviews**

Research Questions	Themes
What characteristics of place-based learning distinguish this approach to learning?	Hands-on Real-life experiences Partnerships Connections to place Exploratory Integrated with other subjects Risk-taking Stewardship
In what ways, if at all, does place-based learning enrich the learning experiences of students in a rural school setting?	Equity and access Real-life experiences Making an impact through stewardship Memorable
In what ways, if at all, is leadership in a place-based learning setting different from leadership in a setting that lacks a place-based focus?	Equity-based Passionate and committed Collaborative and creative Willing to take risks The strong teacher supports including training and planning Ability to form partnerships

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What do leaders in place-based learning settings do to support and sustain the success of their students?	Form partnerships with community organizations Foster connections Create a vision and plan Honor student, staff, and parent voice
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## Discussion of Findings

### *Question 1: What characteristics of place-based learning distinguish this approach to learning?*

As a result of my research and experience with our Connections Program, I have concluded that the following characteristics of place-based learning distinguish this approach to learning:

- Hands-on experiences in a natural setting
- Connections to real-life experiences and learning
- Partnership with schools and community-based organizations
- Connections to the local and global environment
- Explorations and fun incorporated with learning
- Integration of science standards and other core subjects for outdoor experiences
- A willingness by students to take risks
- Stewardship supporting a healthier environment for all ecosystems.
- Classroom learning connected to outdoor learning.
- Love and respect of place.

I heard these characteristics from students and staff, but I also observed them firsthand when I visited classrooms where students were raising salmon, spent a day doing activities with students at Camp Saturna, and spent a day hiking at the North Cascades Institute.



My visits to fourth-grade classrooms along with my communication with students and staff allowed me to observe student learning about watersheds, salmon, life cycles, and stewardship. There were artifacts in classrooms such as student artwork and pledges to protect salmon. Students took care of the salmon they were raising by monitoring the water temperature and feeding the salmon up until the time they were ready to release the salmon. After the salmon were released, students shared with me their stories about removing invasive plants from the salmon habitat and their connections to the care and restoration of salmon.

From the fourth-grade students' perspectives, place-based learning gets them outside in the fresh air. Learning became real as they raised salmon and then released them, making the lifecycle of the salmon meaningful to them. They realized their connection with their local streams and how being stewards of our natural resources is important to the future of salmon and the health of our environment. They know more about their surrounding environment in Mount Baker and Whatcom County. Directly interacting with the environment made learning real to them.

Fifth-grade students perceived place-based learning as more fun and active than learning in the classroom. They enjoyed the weather, fresh air, and their ability to move around. They not only learned about environmental science, but also they had opportunities to get out of their comfort zone with rock climbing and archery. From the students, I heard a wonderment and appreciation for a place that is literally Mount Baker School District's backyard.

After spending a day with students at Camp Saturna, I completely agree with what one of the fifth-grade teachers said: "The learning that occurred at Camp Saturna was a lot around trust and taking risks in a safe environment. There is a tie-in to standards, but it is hard to quantify the trust and community that students built." I observed them learning, teaching each other about

what they learned, and cheering each other on during the climbing wall activity. The wall is 33 feet tall and quite challenging. It was obvious that it was out of many of the students' comfort zone, but they all tried hard and supported each other with cheers and positive comments.

During my day of hiking with sixth graders at North Cascades Institute, I observed a great deal of in-the-moment learning as students were connected with the environment. They learned how to identify plants they can eat, the characteristics of plants and trees, and stewardship of the trails by not removing or damaging plants. They enjoyed the beauty around them as they hiked to a waterfall which they considered an amazing destination.

Our programs allow students the opportunity to collaborate. It allows students the opportunity to take advantage of their multiple learning styles. And, it allows them the opportunity to just be curious about something and to discover it further. There are often what we call teachable moments that take place, and there were so many of those that happened with the Connections Program at Kendall in the Mount Baker School District. There are so many of those that happen with fourth graders that are participating in our student program. I don't think you get that as much in the classroom. You don't get a bald eagle flying over, or you don't get to hear the song of swans as they're migrating through this region. You don't get to hear the deafening call of frogs in the springtime. Just using nature as an outdoor classroom can be so powerful and can be such an important way to connect to middle schoolers or fourth graders or preschoolers or whatever age group it is. It can be such an amazing way to connect us all as human beings and to help us work towards this goal that the outdoors is for everyone.” (N. Zabel, personal communication, May 3, 2023)

***Question 2: In what ways, if at all, does place-based learning enrich the learning experiences of students in a rural school setting?***

The Social Emotional Learning data were interesting as there was some growth. However, many other factors could be attributed to these scores, including but not limited to students' sense of belonging, mental health impacts, trauma in their lives, and relationships with students and teachers. This might be more relevant and valid for a longitudinal study of the impacts of place-based learning on social-emotional outcomes.

My study does not show significant academic growth in reading and math. Any decline or increase in scores would be difficult to attribute to place-based education because there are so many other factors that impact academic achievement, including but not limited to attendance, instruction, and trauma. A longitudinal study using academic data might be more meaningful and valid as well as interesting.

My many conversations with students and staff members led me to the conclusion that, first and foremost, place-based learning and specifically our Connections Program has enriched students' learning experience by providing equity and access to all of our students. Students came to the experience with a variety of experiences and background knowledge about our environment and how they impact it. Some students could be considered avid outdoors people while others have never been to the lakes, rivers, or Mount Baker, even though they are a short distance from the students' homes.

Students' experiences were further enriched by the in-the-moment, real-life experiences that place-based learning provides. They were able to see, smell, hear, and taste the environment they were learning about first-hand. They now have a connection to their surroundings and know that their choices impact the air, streams, rivers, lakes, and forests. They will be better stewards

of our community and world because they understand and have experienced their connection to lifecycles and the health of the environment.

Mount Baker School District students experienced this enrichment because of leaders including their classroom teachers, principals, and the Executive Director of Teaching and Learning who embraced partnerships with our community-based organizations. The expertise and planning for rich learning experiences of the staff at Common Threads, Wild Whatcom, Nooksack Salmon Enhancement Association, Camp Saturna, the North Cascades Institute, and Whatcom Environmental Education Coalition brought learning alive for our students in fun and meaningful ways. Students will remember these experiences for years to come.

A para-educator attending Camp Saturna saw first-hand how students were positively impacted by their outdoor experiences.

The past two days I've witnessed students cheering each other on while climbing up the rock wall, shooting arrows, and just walking up hills on a trail. I saw students try things that at first they were hesitant to try. Soon after they saw their friends doing it, that was all the motivation they needed to take that next step and try it for themselves. I saw students helping other students out on their own during stations without having to be asked. Honestly, getting these students outside and in nature truly did wonders for their self-esteem and mental health if you ask me.

Every conversation or contact I have with the Connections Group emphasizes the impact on students. I don't think we can necessarily quantify at this moment, but I think that opportunity to learn about what's around you and learn with others and excel probably impacts the retention of students in the school district, because of those opportunities. And then the academic growth will come with time. I think that they begin

to see how things connect. Students understand it's not just about them, but it's about what they are learning and how to take that further. (B. Rossman, personal communication, May 19, 2023)

***Question 3: In what ways, if all, is leadership in a place-based learning setting different from leadership in a setting that lacks a place-based focus?***

As a result of my conversations with students and staff, I have concluded that successful and sustainable place-based education requires leadership that is equity-based, passionate, collaborative, committed, creative, organized, and supportive of teachers and the training they need. Doing anything outdoors requires risks and investments to make sure students and staff have what they need for outdoor learning, which can be unpredictable regarding weather and conditions.

My conversations with Mount Baker School District staff and community-based organization staff described leadership for successful place-based education.

Nathan Zabel expressed gratitude for the Mount Baker School District:

I'm just grateful for the Mount Baker School District. They've always been such a gem to work with whether it's teachers at the three elementary schools or the support from the Connections Program was huge. We started that Connections Program really with two school districts, Mount Baker and Blaine. It could have easily fallen off after the pandemic when everything went back to normal. Mount Baker's continued to prioritize outdoor learning. I appreciate the traction that's happened, and I'm excited to see how it hopefully grows. (N. Zabel, personal communication, May 3, 2023)

Jeff Giesen shared that leadership at all levels in a school district needs to be on board. Once he worked with a school district where one principal refused to work with him. For district-

wide equitable experiences, the Superintendent needs to be supportive as well as set expectations. (J. Giesen, personal communication, May 24, 2023)

Terry Carten from Camp Saturna shared his perspective on leadership for outdoor learning:

It is important to get teachers engaged because that makes the learning out here more successful. Funding is always a challenge, so that takes a commitment. What I appreciate about Mount Baker School District is the strong level of buy-in from administrators. This makes it easier to have successful experiences because teachers are more prepared and engaged in the activities. (T. Carten, personal communication, May 18, 2023)

The Connections Program in Mount Baker School District has provided place-based learning for all students in grades kindergarten through sixth grade. Before this program, only certain schools and students were able to access these experiences because they were funded by parents and Parent Teacher Organizations. Now our state Legislature funds the program thanks to Representative Alicia Rule. We have a supportive coalition of community-based organizations that support students and staff by providing expertise for outdoor experiences and support our efforts to tie this learning to the classroom to meet Next Generation Science Standards as well as to promote good citizenship and stewardship of our environment. The collaboration between these organizations and our District leaders and schools is key to sustaining and growing these programs.

***Question 4: What do leaders in placed-based learning settings do to support and sustain the success of their students?***

The themes that emerged from my conversations with teachers and administrators include planning, supporting, and funding as well as having a vision for growth and sustainability in the

future. I addressed the need to plan, support, and fund place-based education under the prior research questions about what sets leadership for outdoor learning apart from other kinds of leadership for school programs. My interviews with participants suggest that the following components have contributed to the success of Mount Baker School District's Connections Program.

- Leaders advocated for funding as well as materials, equipment, and needs
- Leaders formed partnerships through the Whatcom Environmental Education Coalition
- Leaders initiated ongoing collaboration
- Leaders worked with experts to implement curriculum inside and outside the classroom to foster connections between students and the environment, promoting ownership, buy-in, and stewardship
- Leaders noticed a gap. They stepped forward with a vision and plan followed by action to put the Connections Program in place
- Leaders honored student, staff, and parent voices by responding to their needs
- Leaders provided the time and training needed for teacher efficacy in teaching and supporting programs

### **Limitations of Findings**

As a bounded study, it was limited to fourth- through sixth-grade students participating in Mount Baker School District's Connections Program rather than the full spectrum of grades from kindergarten through sixth grade. I interviewed staff working with kindergarten through third grade, but my interviews did not seek to include the voices from our youngest students. In addition, the research is missing parents' perspectives since that survey received very few

responses. My role as principal researcher overlaps my role as Superintendent, so that could have influenced people to be overly positive and less likely to share negative experiences.

Social-emotional learning and academic data were limited, and results were not significant, nor could they be completely tied to place-based, outdoor learning.

Overall the study was limited in time and did not necessarily reach all voices in our school community.

### **Implications and Recommendations for Practice**

In the interviews, I asked students how they would improve their experience if they could. I received the following responses:

- The only thing I could think about that's probably just I am doing more things with water. The only thing we did was the water pressure and how much solid freshwater is there.
- I think if they made the activities a little bit shorter then we could have more activities.
- It was a cool day. Everything was great, but it would be even better if we could stay overnight.
- I would like to go kayaking.
- I think it would be fun to do more art and drama. It was really fun doing skits.
- Have a plan B for the weather.

Similarly, I asked staff I interviewed about their thoughts. Staff shared visions to build on the Connections Program:

Representative Rule shared her thoughts for an idealized experience for students:



I have a vision where every child in every grade has experiences outdoors, so I imagine younger students experiencing the magic of gardens. As students get older, they experience more outdoor settings for learning building up to spending the night at camps. (A. Rule, personal conversation, May 24, 2023)

Career Technical Education Director, Todd Rightmire likes the idea of more consistent outdoor education in elementary school as well as science. If students become involved and interested early, they are more likely to engage in this kind of learning and work in the future. There are plenty of opportunities through CTE and FFA for students to continue on environmental pathways in high school. (T. Rightmire, personal communication, May 24, 2023)

Bridget Rossman, Executive Director of Teaching and Learning in Mount Baker School District, envisions a well-designed and engaging kindergarten through 12<sup>th</sup> grade continuum of the what and why that develops an understanding of access points available to everyone. An integrated curriculum could be expanded with an emphasis on science. (B. Rossman, personal communication, May 19, 2023)

The good news is that the Connections Program has been funded through the state Legislature for the following two years thanks to the advocacy of Representative Alicia Rule. We are working with community-based organizations to find additional grants to sustain fully and build on the current program. Due to the leadership and hard work of all collaborators in the project, including Mount Baker School District, Common Threads, Wild Whatcom, Nooksack Salmon Enhancement Association, Camp Saturna, and North Cascades Institute, the Connections Program has become known and has caught the attention of the media as well as the state Legislature. We are truly grateful for all the collaboration and support.

If I could go back and do things differently, I would not use surveys for people I interviewed; rather I would send out surveys to all fourth-, fifth-, and sixth-grade parents as well as teachers. If I were going to go forward and do more research, I would like to take a more longitudinal approach to see the impact place-based learning has on academic and social-emotional learning over a longer period. Mostly, I want to be that leader who is equity-driven, courageous, and committed enough to sustain and grow this program through time. I believe every student at every level should have the opportunity to learn about the place in which they live and make connections to their impact on our environment at the local and global levels.

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## Appendix A

### Place-Based/Outdoor Learning in Mount Baker School District

#### Student Interview Questions

1. Tell me about your experience learning outside.
2. What did you learn about?
3. How did what you are learning in your classroom prepare you to have a good experience learning outside?
4. How do you think what you are learning and experiencing while learning outside will help you in the future?
5. Do you think there should be more opportunities to learn outside? Why or why not?
6. What do you like about learning outside?
7. What don't you like about learning outside?
8. How would you change or improve your experience?
9. Is there anything else you want to share about your experience?

## **Appendix B**

### **Place-Based/Outdoor Learning in Mount Baker School District**

#### **Staff Interview Questions**

1. Tell me about your experience with students learning outside?
2. What learning occurred during the outdoor experience?
3. How do you think learning outside impacted your students?
4. Did you notice anything different about student engagement or interactions when you were teaching outside?
5. Did your students make connections to learning they have been doing in the classroom?
6. What do you like about teaching outside?
7. What are the challenges?
8. Do you think there should be more opportunities for teaching and learning outside?
9. If our district was going to further implement outdoor learning, what support would teachers need?

10. In a perfect world, what would outdoor learning look like in Mount Baker School

District?

11. What else would you like to share?



## Appendix C

### Parental Permission for Minor Interview and Survey Participation

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**My name is Mary Sewright. As part of my doctoral thesis research study at Western Washington University, I am evaluating the outdoor education program in Mount Baker School District. Participation is voluntary.** The purpose of this form is to give you the information you will need to decide whether your child can participate. Please read the form carefully. You may ask questions about anything that is not clear. When we have answered all of your questions, you can decide if you want to be in the study or not. You will receive a copy of this form, or can download and save this form to keep for future reference.

**Study Title:** The Power of Place-Based Education in a Rural School District: Effective Leadership to Increase Learning, Engagement, and Belonging Through Place-Based Education

**Study Purpose and Rationale:**

The purpose of this study is to Identify and analyze the leadership and essential components needed for place-based education to have a meaningful and lasting positive impact on students' lives including but not limited to social emotional and academic fulfillment.

**Study Tasks:**

Participation for your child involves the option to complete an audio recorded interview (~30 minutes long) and the option to complete an online survey (~15-30 minutes long). The scope of questions will be about the benefits of outdoor/place-based education and will gather feedback regarding students' experiences.

**Inclusion/Exclusion Criteria:**

To be eligible to participate in the study, the your child must be a Mount Baker School District student who is currently participating in place-based/outdoor education or has participated in place-based/outdoor education.

**This study is confidential:**

All information your child shares will be confidential. Private information about this study that your child discloses will not be divulged unless I think that they would harm themselves or others.

**Storage of Data:**

Identifying information will be removed from the data after data analysis is complete. Data will be stored securely, either in a locked filing cabinet in the researcher's office or entered into a secured server. Only members of the research team will have access to the data.

**Risks or Discomforts:** There are no known or risks or anticipated risks.

**Benefits:** There are no benefits for your child to participate in this study

**Withdrawal:** You can withdraw your child from this study. Your child can withdraw at any time. If there is a withdrawal that data will not be used.

**Questions:** If you have question about research participation, contact Mary Sewright at 253.820.4966 or by email at [sewrigm@wwu.edu](mailto:sewrigm@wwu.edu).

If you have questions about your rights as a research participant, you can contact the WWU Office of Research and Sponsored Programs (RSP) at 360.650.2146 or by email at [compliance@wwu.edu](mailto:compliance@wwu.edu).

For parents: By signing below, you are giving permission for your student to participate in this research.

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Childs name

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Parent/Guardian Signature

Parent/Guardian Printed Name

Date

## Appendix D

### Informed Consent for Participants 18+ Years Old

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**My name is Mary Sewright. As part of my doctoral thesis research study at Western Washington University, I am evaluating the outdoor education program in Mount Baker School District. This interview will take approximately 30 minutes. Participation is voluntary.**

The purpose of this form is to give you the information you will need to decide whether to participate. Please read the form carefully. You may ask questions about anything that is not clear. When we have answered all of your questions, you can decide if you want to be in the study or not. You will receive a copy of this form, or can download and save this form to keep for future reference.

**Study Title:** The Power of Place-Based Education in a Rural School District: Effective Leadership to Increase Learning, Engagement, and Belonging Through Place-Based Education

**Study Purpose and Rationale:**

The purpose of this study is to Identify and analyze the leadership and essential components needed for place-based education to have a meaningful and lasting positive impact on students' lives including but not limited to social emotional and academic fulfillment.

**Study Tasks:**

Participation involves the option to complete an audio recorded interview (~30 minutes long). The scope of questions will be about the benefits of outdoor/place-based education and will gather feedback regarding students' experiences.

**Inclusion/Exclusion Criteria:**

To be eligible to participate in the study, the participant must be a Mount Baker School District staff or community-based organization staff (18 plus) who participated in or has knowledge of place-based/outdoor education. There will be two groups: community-based organization faculty/staff and non-community-based (school district based) faculty/staff.

**This study is confidential:**

All data will be maintained as confidential which refers to private information a subject discloses with the expectation that it will not be divulged to others without that subject's permission. When an investigator promises confidentiality, the subject is asked to supply information that could potentially identify that subject, which is then linked to the research data collected from the participant.

**Storage of Data:**

Identifying information will be removed from the data after data analysis is complete. Data will be stored securely, either in a locked filing cabinet in the researcher's office or entered into a software program. Only members of the research team will have access to the data. Your data will not be used or distributed for future research without your additional informed consent.

**Risks or Discomforts:** There are no known or risks or anticipated risks.

**Benefits:** There are no benefits for participating in this study

**Withdrawal:** You can withdraw your consent to participate at any time during the process. If you choose to withdraw, the data collected will be destroyed.

**Questions:** If you have questions about research participation, contact Mary Sewright at 253.820.4966 or by email at [sewrigm@wwu.edu](mailto:sewrigm@wwu.edu).

If you have questions about your rights as a research participant, you can contact the WWU Office of Research and Sponsored Programs (RSP) at 360.650.2146 or by email at [compliance@wwu.edu](mailto:compliance@wwu.edu).