Individual Adopter School - Agnes Gray: Year 1 Case Study

Maine School Administrative District #17, Region 6 – Western Maine

Background

Agnes Gray Elementary School ("Agnes Gray") is one of eight elementary schools in Maine School Administrative District #17 (MSAD #17). Located in West Paris, the school serves 135 students in pre-kindergarten through 6th grade. The National Center for Education Statistics (NCES) classifies Agnes Gray as a rural school, and there is one classroom per grade for pre-kindergarten through 6th. The proportion of students identified as economically disadvantaged (62 percent) is substantially higher than the state average (41 percent) (Table 1).[1]

TABLE 1: SOCIOECONOMIC AND DEMOGRAPHIC CONTEXT

	SAU	Maine
Number of Students	3,376	178,860
Locale Classification	Rural	N/A
Students Identified as White	93%	88%
Students Identified as Economically Disadvantaged	56%	41%
Students Eligible for Free/Reduced Price Lunch (Agnes Gray Elementary School)	66%	44%
Students Identified with Disabilities	19%	18%
Student/Teacher Ratio	13.03	N/A
Median Household Income	$51,168	$57,918
Adults with a Bachelor's Degree or Higher	22%	32%
Adults in Labor Force	84%	63%

Sources: Maine Department of Education, National Center for Education Statistics, and U.S. Census Bureau

Development of pilot project

In August 2021, Agnes Gray received a Rethinking Responsive Education Ventures (RREV) award ($249,961) to develop and implement an outdoor education program called *Teaching Outside: The Box* in the 2021–2022 school year. This program was developed by a two-person pilot team consisting of the school's principal and a 5th grade teacher who participated in the Spring 2021 Innovative Mindset Pilot Development (IMPD) course. A pilot team member explained they were interested in developing a program that addresses the social context at the school, where about 25 percent of students receive social services and many students have had

[1] School data was collected from the Every Student Succeeds Act (ESSA) Dashboard reported by the Maine Department of Education and the National Center for Education Statistics (NCES) Search For Schools database. SAU information was collected from the Maine ESSA Dashboard, the NCES Search For Schools database, and the NCES Education Demographic and Geographic Estimates (EDGE) database. Information about the State of Maine was collected from the ESSA Dashboard and the U.S. Census Bureau Maine Quick Facts report. Note, the Students Eligible For Free/Reduced Price Lunch on a state level contains data from the 2018-2019 school year (the most recent publicly available data for the state), while both school and SAU contain data from the 2019-2020 school year.

adverse childhood experiences (ACEs). According to the team member, they entered the IMPD course with the intention of developing a program to help students "cope with trauma they've experienced in healthy ways"—especially through outdoor education. The pilot team noted that the IMPD course helped them become better thinkers and advocates for outdoor education as a strategy for addressing and supporting students with ACEs.

Prior to the RREV funding, Agnes Gray students already had access to some outdoor education areas and participated in programs such as Forest Fridays, which brought students outside for one-off lessons. However, what distinguishes *Teaching Outside: The Box* from these earlier initiatives is the more structured and intentional approach in providing frequent outdoor learning opportunities for all students.

Program description

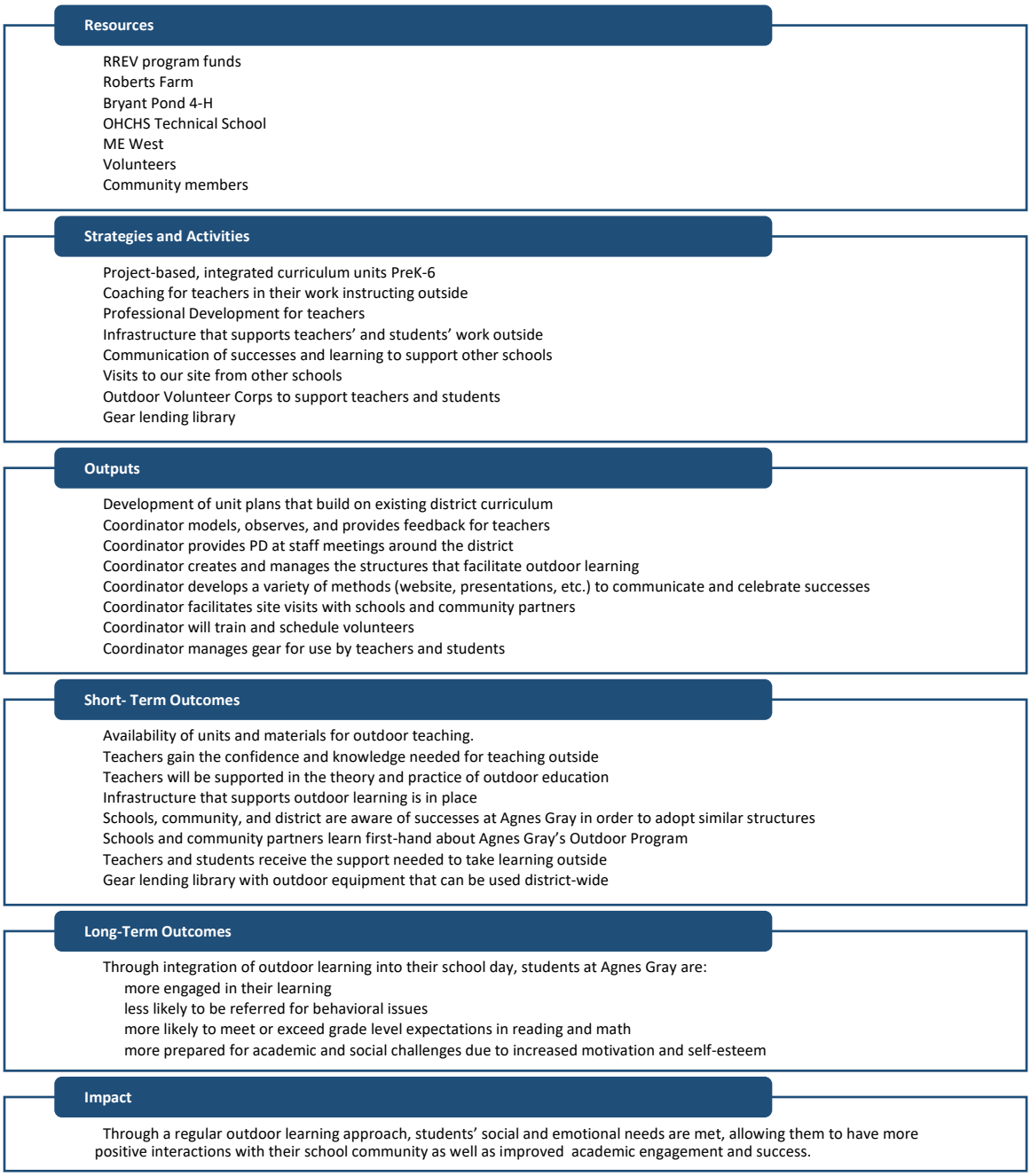
The *Teaching Outside: The Box* pilot (Exhibit 1) is a holistic strategy to integrate outdoor learning across schools within the district. Agnes Gray's innovative education model consists of two complementary components, which together are intended to support a school-wide culture of outdoor learning in which teachers regularly find ways to bring students outside and integrate these spaces and approaches throughout their teaching.

The first component of Agnes Gray's model is a new full-time Outdoor Learning Coordinator (OLC) position. The purpose of this position is to create, expand, and support the adaptation of a project-based curriculum to an outdoor education setting across the entire school. To do so, the OLC is responsible for adapting curriculum resources to outdoor lesson formats, providing professional development on facilitating outdoor instruction to other staff at Agnes Gray, and co-teaching outdoor lessons with classroom teachers. The OLC works directly with classroom teachers in the planning, facilitation, and assessment of outdoor lessons, and led or co-led individual outdoor learning experiences. The OLC is also intended to be a resource for other schools in the district by helping teachers develop and adapt project-based outdoor education lessons and activities.

The second use of RREV funding provides for more physical infrastructure at Agnes Gray, including the construction of a yurt that can be used for outdoor classes and activities throughout the year, even during cold or inclement weather. The program also establishes an Outdoor Volunteer Corps, which will provide parents and other community members a structure to help with the program. For example, volunteers will chaperone outdoor experiences, leverage their personal connections to potential partners such as Maine Audubon, and manage the logistics of an outdoor gear lending library.

Taken together, the new infrastructure and OLC position allow for an expanded, project-based curriculum of outdoor education. This curriculum is focused primarily on outdoor learning opportunities that explore the school's natural surroundings. The curriculum has expanded beyond ecology to include other subjects, including science, technology, engineering, and mathematics (STEM).

Exhibit 1. Project Logic Model[2]



[2] Logic model format adapted from REL NEI Logic Model Template from the *Logic Models for Program Design, Implementation, and Evaluation: Workshop Toolkit* referenced in RREV Module 4.https://ies.ed.gov/ncee/edlabs/regions/northeast/pdf/REL_2015057.pdf

Innovativeness and responsiveness of learning model

Agnes Gray's *Teaching Outside: The Box* program is innovative and responsive for four main reasons:

1. **The Outdoor Learning Coordinator role is responsible for maximizing the utility of the physical infrastructure.** Although many schools in Maine have outdoor facilities or grounds where students can learn outside, a distinguishing feature of Agnes Gray's RREV program is the way it leverages the OLC position to ensure that these resources are used to their full potential. The presence of the OLC, a staff member responsible for supporting outdoor learning across the school, was intended to facilitate and provide an impetus for teachers in all grades to consider how to integrate outdoor education into their overall teaching approach. Throughout the year teachers were able to develop their outdoor learning facilitation skills while actively teaching their classes.

INNOVATIONS

Complimentary use of personnel and infrastructure

Whole-school strategy

Engage community assets

Targeting students with ACEs

2. **It created a whole-school strategy for outdoor education**. What separates *Teaching Outside: The Box* from Agnes Gray's existing outdoor education programs is that it provides a structure for sustained *school-wide engagement* with outdoor education, in contrast to smaller, classroom-level programs. Students at all grade levels regularly complete lessons outside, which means students at Agnes Gray will experience outdoor learning throughout their entire time in elementary school. By establishing outdoor learning as a consistent element of their early education, Agnes Gray's model will allow students to see the outdoors as a natural part of their schooling, rather than a one-off, rare occasion or something that only certain children get to experience depending on their individual teachers' interests. Moreover, the presence of the OLC, a staff member responsible for supporting outdoor learning, is intended to facilitate and provide an impetus for teachers in all grades to consider how to integrate outdoor education into their overall teaching approach.

3. **Community assets and programs are integrated into the pilot.** The local community has an abundance of natural assets, including rivers and woods, which the school has been using for many years in outdoor teaching. In fact, the school already has three pavilions and a cabin used as an outdoor learning space, and regularly implements educational programming, such as Forest Fridays,[3] in which students participate in one-off outdoor lessons. According to the implementation team, these programs are popular with students and teachers, but could be a "logistical nightmare" and are not necessarily integrated into the broader curriculum. The pilot builds on these assets by incorporating them into a more cohesive program with a dedicated staff person who is responsible for coordinating activities and ensuring lessons are meaningfully integrated with content standards.

[3] See the *Sun Journal* article Teaching 'outside the box' (in West Paris).

4. **Activities specifically target students who have ACEs**. One of the key responsibilities of the OLC is to develop outdoor education activities that boost students' engagement, self-esteem, and motivation. By hiring a full-time staff member with expertise in outdoor education, the pilot program provides teachers with additional support to develop and implement creative and individually tailored ways to engage students who struggle in traditional classroom settings. Further, the professional development provided by the OLC provides ongoing opportunities to experiment with new ways to support students through outdoor education.

Implementation of learning model

Infrastructure

During year one of pilot implementation, the school leveraged the pre-existing outdoor learning spaces while making arrangements for the construction of a yurt onsite. The school regularly utilized the two pre-existing pavilions, cabin, and created a hammock area in the woods to provide more spaces for students and teachers to use while learning outdoors. However, the construction of the yurt has been slower than anticipated, which the pilot team attributes to global supply chain bottlenecks of construction materials. During year one this structure was approved and ordered and will be assembled before the 2022-2023 school year.

Staffing

Despite being a key innovation of the pilot model, staffing challenges disrupted pilot implementation during year one. First, a member of the pilot development team took an unexpected leave, which caused delays because it meant one person had to fill what was planned to be a two-person role. Second, Agnes Gray faced whole school staffing shortages in Fall 2021, causing the OLC to spend substantial time teaching other classes instead of building the outdoor learning curriculum. Third, the ongoing pandemic made staffing absences unpredictable throughout the school year. Fourth, turnover at the district level caused a backlog of background checks, which delayed the formation of the Outdoor Volunteer Corps and the ongoing pandemic and staff changes at the district level limited the number of visitors the school could have at any given time.

Outcomes

Students and teachers perceive outdoor learning to have positive effects on students' focus, especially among students with adverse childhood experiences. Students in focus groups across grade levels reported enjoying outdoor learning and looking forward to learning outside during the day. Particularly, students enjoyed the ability to move around, get fresh air, and use the outdoor spaces constructed during academic lessons. Though students across grade levels identified that distractions like loud noises or other classes at recess could disrupt learning, focus groups indicated that it is easier to learn while outside. The majority of students provided positive feedback on an anonymous survey (Table 2). In response to an open-ended question about their overall experience, one student commented "my favorite thing about learning outside is the fresh air, it helps me think." Another student stated that "we can be more spread out or we can make reading we have hammocks." Further, teachers reported greater engagement and fewer disruptive behaviors during outdoor lessons. Teachers identified that students with ACEs who might otherwise struggle in a classroom context seemed calmer and

> "My favorite thing about learning outside this year was everything was more engage and it was more hands on and that is one this that getting my mind going much faster."
>
> Student

more attentive while learning outdoors. One of the teachers observed, "My kids who could be really quiet in the classroom, all those other things, just the prevalence of negative self talk, you get them outside and all of a sudden they're different kids. This is their world and this makes sense to them. Where they only felt failure when they're inside, so that's been really good. The relationship is huge and them feeling another space that they can be more successful in doesn't feel like school."

TABLE 2: SUMMARY OF STUDENT SUVEY RESULTS (n=37)

	Strongly or somewhat agree	Neither agree nor disagree	Somewhat or strongly disagree
I am glad I went outside to learn this year.	78%	5%	5%
Going outside helped me learn this year.	68%	16%	5%
Overall, I liked my experience going outside to learn this year.	73%	14%	3%
This year, I had more opportunities to learn outside a traditional classroom than in the past.	70%	14%	5%

Teachers reported a shift in school culture to be more willing to and interested in delivering instruction outside. This pilot has allowed teachers to develop their outdoor facilitation skills, build the systems necessary to smoothly transition classes to outdoor learning, and develop a curriculum bank with lessons specifically designed for outdoor learning. Parents at the school also notice the impact of the pilot on their students' learning and experience at school (Table 3).

TABLE 3: SUMMARY OF PARENT SURVEY RESULTS (n=16)

Question	Results
How important is it to you that schools offer responsive educational activities?	Very important – 6% Moderately important – 94%
How satisfied are you with the availability of responsive education activities offered through your child's school?	Very satisfied – 69% Somewhat satisfied – 25% Neither Satisfied nor Dissatisfied – 6%
Compared with last school year (2020-21), how much opportunity has your child had to participate in responsive educational activities this year?	A lot more opportunity – 56% Slightly more opportunity – 31% About the same as last year – 6% No Response – 6%
Would you recommend this program to other parents	Yes – 88% No Response – 12%

Measuring student engagement

The pilot systematically measured student engagement during outdoor lessons through the assistance of an outside observer. This observer identified target behaviors including on-task behavior, paying attention, and asking questions to track during lesson observations. Lesson observations occurred once a week with the 1st grade class throughout the first year. The outside observer noticed that "In general [the pilot is] a positive effect. There's no negative to being outside with kids. And so it's just trying to figure out how to do it in a way that's consistent, or that is safe. In a way that lends itself to authentic learning experiences." The results of the year-long observation will be reported later in summer 2022.

Future Plans

> "[Kids] will often say this has been the best part of my day, it's this time we've spent outside."
>
> Outdoor Learning Coordinator

In year two, the OLC will work with teachers from other schools in the district to expand the pilot program. Though the OLC will still be based at Agnes Gray, the OLC will travel to other schools within the district or in the area to help more teachers develop the skills necessary to facilitate learning outside. The OLC currently envisions week-long focuses with teachers where, as a team, they will plan, execute, and reflect on a outdoor lesson. These lesson plans will both utilize and add to the currently existing bank of adapted curriculum. Teachers at other schools will have access to these learning resources outside of the time they spend directly working with the OLC.

Making the case for the adoption of the Outdoor Learning Coordinator as a permanent, district-wide position. As the scope of the pilot expands to focus on professional development opportunities across the district, so does the need to build a case for why an OLC should become a permanent position within the district. The pilot team intends to assess whether this position is necessary for enabling outdoor education in schools throughout the district. The hope is that outdoor learning will facilitate the desired changes in lesson delivery district-wide and, as a result, improve student social and emotional wellbeing while maintaining or exceeding student academic outcomes.

In year two, the yurt will be ready as an additional outdoor learning space at Agnes Gray. Over the summer the deck will be constructed and the yurt will be delivered and assembled. This will provide a fifth outdoor learning space in addition to the two pavilions, orchard, and wooded area currently in use. Further, this will provide a necessary outdoor structure that can be used during inclement weather.

Lessons learned

A staff position devoted to outdoor learning can help teachers feel more comfortable using outdoor space. During interviews, teachers commented that before the pilot year, they were less likely to use outdoor spaces because of the logistical challenges, such as bringing materials and supplies, concerns about classroom management outside, and uncertainty about how to integrate core content with outdoor activities. However, since the OLC position was created, teachers have felt more confident about how to use the outdoor assets available to them and feel more prepared to deliver lessons outside independently. For example, one teacher explained that having the OLC position has "been huge [because] we can manage the

space and manage where everybody is going. Expertise on how classroom management looks a little bit different outside." This teacher explained that the OLC helped teachers make better use of the space and feel more comfortable taking young students outside on a regular basis.

Establishing clear behavioral expectations early creates an environment for flexibility and fun activities throughout the year. The OLC explained students who have not had experience learning outside the classroom sometimes struggle to understand behavioral expectations when they are outside, which is why time was spent up front to establish how to behave during outdoor learning time. According to the OLC, setting these expectations early creates a firmer foundation for fun activities. For example, students have enjoyed hikes, donned donated rubber boots to play in a nearby stream, and planted seeds that grow well during winter. During a site visit, we observed students clearly understood the boundaries associated with different outdoor spaces and differentiated their behavior based on the lesson type and procedures in outdoor spaces. During interviews with students, multiple students noted that there are often distractions while learning outside and it requires them to focus differently.

A whole-school outdoor education initiative requires systems and processes for coordinating outdoor space and supplies. A member of the pilot team commented that logistical challenges have hampered outdoor education programs in the past, especially when multiple teachers had to coordinate to reserve space, materials, and time with community partners. In response to this challenge, Agnes Gray invested effort in creating simple and systematic processes for teachers to coordinate with each other. For example, after a teacher identified the challenge of returning to the classroom after realizing lesson equipment was missing, the school invested in designated clipboards and clipboard storage in outdoor learning spaces to ensure teachers will have the materials they need when using the space. During a site visit, we observed students packing materials in specific bags designated for classes to use in outdoor classrooms. Additionally, teachers were prepared with materials already set up for lessons by the OLC and extra materials should a student have forgotten or misplaced equipment.

District-level systems and support can help individual schools maximize resources. At the district level, a STEM educator was hired to facilitate experiential learning as part of a district-wide fieldtrip program to a local farm. The OLC and the STEM educator have been able to collaborate on content development. Students at a local high school helped develop outdoor learning resources, including building parts of the outdoor learning space. In year two the OLC will be working with different schools around the district, so the team is currently planning to build relationships with teachers from other schools within the district to expand the pilot to other campuses. To gage interest, the pilot team distributed a survey to district elementary school principals at the end of the 2021/2022 school year and are using the feedback to plan for the expansion of the pilot in the fall.

Teachers may be more open to trying new approaches in subject areas that are not assessed through state standardized tests. During the Fall 2021 semester, most outdoor lessons focused on science and social studies topics. Both teachers and community partners and posited that teachers are more willing to experiment with new activities and approaches in these subjects because they are not included on statewide assessments for their grades. They contrasted this willingness to experiment with a greater hesitancy toward trying new approaches in tested subjects such as math or English.

Logistical adaptations help ease the transition for working outdoors. In addition to adapting curriculum and professional development, teachers need logistical solutions to help meet the needs of students while learning outside. Teachers at Agnes Gray continued to use the strategy of having students bags specifically designed for taking their learning materials with them to outdoor classrooms. This system was first used as a response to the COVID pandemic. In addition, having sheds nearby supplied with clip boards, white boards, extra materials for students, and any learning materials allows teachers to quickly address student needs without returning to their classroom. Teachers also used visual markers to designate the boundaries of outdoor spaces to ensure classes could be monitored by a single teacher and not disrupt other lessons occurring outside at the same time.

Practical considerations like plumbing, electricity, and internet connectivity will influence the pace, location, and purpose of outdoor infrastructure. During the site visit, teachers and administrators described challenges that they anticipate facing while using the yurt including lack of electricity, Wi-Fi, or running water. Pilot leaders are taking these challenges into consideration, but in so doing it has caused delays to the construction and use of the outdoor space.