

Children in Action: Envisioning Sustainable Futures Through Place-Based Learning and Rural Literacies

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Abstract

This qualitative action-based study involves research with a group of children 7-8 years of age in a school located in an underserved rural area in North Idaho, U.S. Incorporating health and agricultural content areas, children navigated the relationship between food choices and food security, and they collaboratively proposed strategies to help reduce food waste. Through place-conscious learning and connecting with local food sources, children also understood how rural literacies serve as a powerful tool to increase their capacity for food and nutrition, as well as engage in cross-disciplinary and interdisciplinary collaboration to develop balanced dietary and sustainability practices in an uncertain future. These children's efforts to advocate for change within their communities and beyond emphasize how local participation can lead to a broader global influence. The ultimate purpose of this study is not only to contribute to the research on rural literacies and nutritional awareness but also to inform decision making and actions for children, educators, and communities.

Keywords

Young children, action-based study, food choices, place-conscious learning, sustainability, rural literacies

Introduction

Grounded in rural literacies (Marietta & Marietta, 2021; Green & Corbett, 2013; Eppley & Corbett, 2012) and place-based learning (Azano et al., 2021; Schafft & Jackson, 2010; Eppley et al., 2018), this study aims at providing children literacy and other learning opportunities as they explore practices like nutritional preservation, food waste reduction, and sustainability as we navigate food-related uncertainties.

Incorporating health and agricultural content areas, the participatory action research (PAR) with children aligns with the goal of a larger USDA project about food education that seeks to establish connections between rural schools and communities, promoting educational curricula to improve rural children's food and nutrition-based learning. The broader goal of this study is not only to contribute to the research on rural

literacies and food-nutrition knowledge but also to inform decision making and actions for children, educators, and communities.

Food provides vital substance for daily life. According to the World Health Organization (2020), a healthy diet supports adults and children to protect against malnutrition in all its forms. The organization states that specific composition of a balanced diet may differ based on individual factors such as age, gender, lifestyle, and degree of fitness activity, as well as cultural context, local food availability, and dietary customs. Irrespective of individual circumstances, WHO (2000; 2019) and USDA (2025) recommend a diet balanced across food groups where energy intake is proportional to energy expenditure, such as decreasing fat intake to less than 30% energy intake and sugar to less than 10%. Food choice has a direct impact

on health and economic outcomes for the benefit of both the individual and society (Sandell et al., 2016), which is important for current and future generations (Waddingham et al., 2018). In an ever-changing world, educating future generations on the importance of nutrition is a necessary step in developing and maintaining a healthy community. Empirical research suggests that dietary habits established during childhood have a lasting influence throughout adulthood (Sandell et al., 2016; Waddingham et al., 2018). Informing children's perceptions of balanced food choices and consumption habits (Janhonen et al., 2016) may consistently contribute to their sustained dietary practices and set countries on track to sustainable futures.

Rodriguez and Grahame (2017) adopt an ecological perspective to investigate factors influencing food access which include problems of inadequate nutrition education. Other research examines young children's access to fresh local produce in rural Appalachia, specifically addresses the barriers of local food consumption due to food-related practice, funding, and agricultural knowledge (Schroeder et al., 2024). In the landscape of activating food educational awareness, rural communities in Tasmania, Australia made endeavors to promote food literacy towards gardening, producing healthy food, and preparing food by experiential learning. In Peru, Cusquisibán-Alcantara et al. (2024) report the impact of a nutrition education intervention on healthy eating habits in a rural community. Although these studies provide multiple lenses of the importance, issues, and potential solutions in reviving food education in rural regions, children's involvement and the correspondence to place-based knowledge are minimal and inadequate to address sustainable food practices to understand food conservation.

Besides the importance of driving decisions around food choice, food waste is another urgent issue that needs feasible approaches to prevent and simultaneously promote food sustainability (Gundersen & Ziliak, 2018). According to research from the Food and Agriculture Organization (FAO), about one-third to one-half of the world's food is thrown away and becomes waste (FAO, 2011), which causes economic, environmental, and food insecurity problems (GRFC, 2025). As the impact of food waste has become a global issue, it is imperative to prevent food waste and make changes at myriad levels (Ioannou et al., 2022). Given that, food waste education has become one of the portals through which to address these issues by planning sustainable development within school communities. In addition to the findings provided by the aforementioned studies, further research has offered insights on conceptual and practical solutions to reduce food waste and educate students. For instance, Mikkelsen (2022) reported on research that brought youth into the solution of fighting food waste. Bagelman (2018) discussed creative ways in which youth have worked towards eradicating food insecurity and supporting Indigenous food system revitalization.

Global early childhood systems that integrate food-waste reduction into daily practice provide adaptive paradigms for fostering children's agency in food sustainability learning. For example, Finnish ECE systems emphasize child-centered models to support participatory development work in food education that empowers children as active change agents (Janhonen et al., 2024; Janhonen et al., 2016). The Swedish National Food Agency (2026) also proposes plans for using school lunches as educational tools to increase children's knowledge about food waste reduction

and sustainable ways of living. Likewise, the Norwegian food and meal guidelines share pedagogical practices to minimize food waste for children's future understanding of environmental sustainability (Billing et al., 2025). These transformative food-based programs expand approaches for engaging children's broader learning experiences to emphasize sustainable dimensions of food and collaborative program-solving skills. Investing in these practices may play a vital role in preparing children to become informed, capable contributors who take actions in an unpredictable future, particularly around challenges like food insecurity and food waste.

These extensive studies shed light on addressing eating habits among children and young adults and emphasize the importance of food sustainability education, offering evidence around how young children participate in the decision-making process of food choice in- and out-of-school environments, and in what ways their food choice influences food sustainability to avoid short- and long-term consequences. Inspired by research in the U.S. and around the world, this study aims for creating the connection between healthy eating and food sustainability and for amplifying children's perspectives to understand the interconnectedness between the two concepts. In this study, we examined children's food choices through their rural literacy practices. By engaging in these activities, children explored the relationship between healthy eating and food security, and they collaboratively proposed strategies to help reduce food waste as they navigate an uncertain future.

Background of the Study

This research worked with children from early primary grades in a school located in an underserved rural area in North Idaho that, despite its extensive agricultural activities, experiences significant disparities between food access and consumption. In 2021, the per capita income in the county averaged around \$31,000 (US Census, 2023), with around 10% of the population being food insecure (Feeding America, 2023). The USDA Food Access Research Atlas notes that three census tracts within the county are considered areas with Low Income and Low Access (ERS, 2023). Furthermore, the county's obesity rate has risen to close to 30% (Population Health Institute, 2022). In recent years, data from local counties shows an overall increase in the obesity rate of youth with a notable jump during the COVID-19 pandemic due to increased stressors like housing and financial insecurity (Sun, 2022). Based on the information from scholars and extension educators in the local research institution, access to local food in school meals has been very limited, as the height of the growing season does not overlap with the academic year, and no network exists linking local food producers with school systems (Farm to School, 2025; Small Farms, 2025). According to the district, 35.26% of students at the elementary school receive free or reduced lunch (Idaho Department of Education, 2025). Meanwhile, demand for local food has risen rapidly as more people recognize the benefits of eating local food, such as better nutritional value and greater resilience to supply and demand shocks. Because of the high presence of agriculture in this region, communities have expressed the need to educate and foster future leaders in the agriculture sector at a young age to navigate healthy eating and food sustainability.

Built upon the review of literature and the community's acute need to improve access to local food for advancing nutritional health, this project invites children to brainstorm the connections between a balanced diet and food waste through a literacy lens. During this study, children have been encouraged to inform their understanding of nutritional preservation, help them make more nutritional dietary choices, and enable them to utilize local food resources. Through place-based and nature-based learning, children also explored how rural literacies serve as a tool to increase their capacity for food and nutrition, as well as engage in cross-disciplinary and interdisciplinary collaboration to enhance healthy diet and sustainability in an uncertain future.

Theoretical Perspectives

Place-based pedagogy

“Place-based” or “place-conscious” pedagogy is informed by an education that recognizes local identities, utilizes local environment and community to solve real world problems, and promotes a strong sense of belonging and accountability (Azano et al., 2021; Schafft & Jackson, 2010). Correspondingly, relations between place and people must be understood to pinpoint the sociocultural and ecological dimensions of place, foregrounding local relevance to address community concerns and to thrive despite the challenges of unpredictable rapid transformation (Kerkham & Comber, 2013). To walk away from a conventional notion that a community exists in isolation (Eppley, 2011), place-based pedagogy focuses not just on learning from the focal students' background, it allows children to develop in-depth perception and find their people, get to know the true colors of places, and

foster representations of their community (Somerville, 2007). Calling on Schafft & Jackson's (2010) work on placing education, they offer a collection of scholarship as evidence of the multifaceted nature and resilience of rural people and how to collaborate with community members as valuable allies to rethink alternatives for living.

Since each rural community is an assemblage of people, culture, history, economics, and values, capturing the complex and nuanced meanings of a local place (Azano et al., 2021) is essential to develop a more comprehensive exploration of rural places. Thus, rooted in place-based pedagogy, children were invited to cultivate a sense of place and understand why place matters with guiding questions embedded in the program: what their hometown means to them, how do children respond to the idea of rural places, and in what ways the rural as “local space” creates social representation (Cormack, 2013). These questions signal the need to make an embodied and reflective connection to place learning—ways of reading and writing futures in rural environments—as they integrate community-oriented pedagogy to realize what places can teach us and how we can commit to establishing food sustainability (Kerkham & Comber, 2013). The perspective of “rurality” is further reexamined through the lens of rural literacies that is activated and broadened to the focal children and through which place-conscious literacy practices can be integrated into children's real-life experience.

Exploring rural literacies

Throughout history and into the present, literacy has been defined in terms of values, mentalities, generalized knowledge, and/or decontextualized quantitative measures (Graff & Duffy, 2011). While diverse versions of

literacy conceptualize a quantitatively measurable phenomenon, these linear versions of literacy fail to understand literacy in a wide variety of ways that reflect shifting cultural, social, economic, political, and educational priorities (Corbett & Donehower, 2017). Hence, from a sociocultural framework, literacy is a practice shaped by the values of society, rather than an individual psychological act that is separable from sociocultural environments (Street & Street, 1995). Aligned with this perspective, it is essential to suggest that literacy mirrors the ways in which we see the world and reflects the different but sometimes connected Discourses to which we belong (Gee, 2018; Edmondson, 2001). In this regard, literacy acquisition is not only a dynamic process to facilitate individuals' linguistic growth, but also, more importantly, is subjected to the complex development of social beings' practices and transformations that are part of a cultural engagement for certain groups of people (Esposito, Kebede, & Maddox, 2015; Edmondson, 2001). Furthermore, as technology develops in the 21st century, the New London Group (2000) extends the definition of literacy and illustrates that multiple modes of literate communication are involved in a digitally-rich society. Within and beyond classroom contexts, conventional views of literacy are insufficient to support children's exploration of the multimodal and social orientation of new literacies.

Literacy, including multimodal literacy, as a practice that follows social, cultural, institutional, and historical dimensions of actions (Gee, 2018), is taken up as a whole to examine what and how rural literacies are defined and reflected in rural research. Donehower et al. (2007) have defined rural literacies as "literate skills needed ... to pursue the opportunities and create the public policies and economic opportunities needed to sustain

rural communities" (p. 4). Rural literacies are not practices for only rural people to sustain their local communities; rather, it is a part of complex rural sponsorship networks that represent place-based knowledge, agricultural literacy, and localized socio-cultural life (Donehower et al., 2007; Nichols, 2024), emphasizing the performative work of literate practices that can reconstruct rural identity (Corbett & Donehower, 2017). Rural literacies, as signifiers of the specific sociocultural and geographic features of the local places, are inseparable from the lived experiences of rural children. Connected to place-based learning, their exploration of the discourses related to rural lives and surroundings can be interpreted as rural literacies (Azano et al., 2021). Besides, as Green and Corbett (2013) describe, "rural literacies are multiple, mutable, and mobile, and even relational" operating in a globalized world (p. 12). To challenge the oversimplified understanding of rural literacies, we should address assumptions that rural places are short of resources and opportunities for literacy and community-driven engagement. Rather, rural children are capable of developing a consciousness about place, community, and local connections, as well as participating in democratic actions with global impact (Eppley, 2011; 2017). Through practicing rural literacies, children in this study not only developed an understanding of the local agriculture which plays vital roles for promoting public health but also navigated sustainable food stewardship while enhancing community bonds in an uncertain future. These children's efforts to advocate for change within their communities and beyond emphasize how local participation can lead to a broader global influence.

Methods

Participatory action research with children

This qualitative participatory action study (Masters & Hughes, 1995; Wimpenny, 2010; Kooijmans & Pouw, 2023) involves research with young children and advocates for the significance of children's literacy engagement in navigating nutrition, food, and sustainability in an uncertain future. While children in my study are younger than youth, they should still be encouraged to participate in research as co-researchers to help solve real-world issues. Since they are younger than teenagers, adults may assume that they lack the capability to participate in research (Murray, 2019) due to their maturity and development (Sevón et al., 2025). These assumptions indicate that adults could provide more opportunities for young children to engage in PAR by acknowledging their agency, understanding their ways of expression, and embracing children's culture to better communicate with them. Recognizing children as active agents who are capable of constructing meaning, influencing their own development, and contributing to their social communities (Adair & Colegrove, 2021), children are encouraged to participate in decision-making on issues which affect them (Shamrova & Cummings, 2017). Due to the unequal power relations between child participants and adult researchers, it is important to adopt a progressive perspective that redistributes or leverages power to give children opportunities to be part of research (Wang, 2025). PAR with children initiates a mechanism through which agency is valued and performed by children. This participation also amplifies their voices, empowers their engagement, and fulfills both research and action agendas while prioritizing children's insight (Shamrova & Cummings, 2017). Through this collaboration with my child participants,

they learned, reflected, and explored comprehensive messages that might influence their own perceptions of nutrition and would be able to share food consumption knowledge with their families, communities, and broader contexts in the future. This child-centered approach identified them as co-researchers who addressed issues within their environments, ultimately, proposed solutions that may lead to transformative vision and action.

Context and setting

The study was conducted in a summer extension program that focused on exploring nutrition/healthy diet and local agriculture in a rural elementary school, located in a town with a predominately white population of about 900 in Idaho. This elementary school serves students in grades K-6 and operates within the school district which has a combined middle and high school. It is surrounded by rolling hills of farmland of the Palouse to the south and by coniferous forest areas to the north. The local economy is driven by the farming, ranching, and timber industries. As one of the participating schools for the larger USDA project, this school actively fosters health education by promoting wellness, good nutrition, and regular physical activity as a part of the total learning environment, supporting rural children in succeeding with the land and food production systems. From the larger USDA project that extends through the school year, all children in this rural school, including the children who participated in this 7-week summer project, received fresh fruits and vegetables from local farms accompanied with brochures. Because these child participants have more availability and flexibility during the summer, participative observations and in-depth interviews were conducted with them during this summer program with connections to the educational activities spread across the school year.

The school supplies food to students through central ordering system that sources produce from across the country during the school year, and students have options to bring their own lunch and snacks. There is a cafeteria, a buffet line, and a salad bar. Since the study was conducted when school was not in session, students either brought their own food from home or food was provided as part of the summer program during field trips. As part of the program, students make snacks using local agricultural products for learning purposes. To engage in nutrition education, the school promotes healthy eating patterns coordinated with the comprehensive health education program, including education, health, and food services. They also participate in the Farm to School program and other community activities. The school also has a school garden and a greenhouse seed starting program for 7th to 12th-grade students. Because this study collaborated with children at various ages who were in the K-6 summer program, the greenhouse events were not available.

Participants

Before selecting participants for data collection, this study was approved by the IRB office in my institution. A total of 45 students enrolled into this 7-week summer extension program, but not all of them attended regularly. The number of students is much lower in summer compared to the regular school year. The school's demographic makeup includes 91.3% white students, 5.3% Latino students, 1.6% multiracial, and less than one percent in other racial categories (Idaho Report Card, 2026). To recruit participants, I sought children who showed interest in voluntarily participating and whose parents or legal guardians provided formal permission for data collection. With plain and kid-friendly language, I explained to the children that participation in this study was

completely optional. All of them and their families could decide whether or not to continue or to withdraw from this study at any time. Following this protocol, data was collected with six children who were 7-8 years old. The selected children were two girls (Ann and Peggie) and four boys (Evan, Tim, Ben, and Oscar); pseudonyms are used to protect these children's identities. With a small group of child participants, it was easier to manage ethical considerations. While I admit the potential limitations of the small-scale research, the strengths of conducting research with a small group of children can also be valued as children might feel more comfortable and empowered as co-researchers. As the facilitator leading this study, I was able to have more direct interactions and deeper engagements with these children.

Data collection

Using the PAR with children approach, children actively participated in data co-production and mutual learning processes. During my collaboration with these children in the summer program, data was gathered from a variety of activities, including the local agriculture immersion, hands-on learning projects, literacy-related engagements, and other local food exploration activities with children. These activities are specific to this summer program, and the curriculum was either adopted from the extension program in the county or designed by the researcher with more food literacy involved. Aside from the focus on food literacy and sustainability, other curricular topics were taught as an enrichment of the place-based learning, such as wheat harvesting, milk production, and meat science. Corresponding to this cooperative data co-production framework, dynamic ethnographic methods were adopted, including naturalistic observation, semi-structured interviews,

artifact/literacy material analysis, art-based methods (Leavy, 2020), and embodied sensory walks (Hammarsten, 2024).

I made observations 1-2 times a week and took field notes documenting the learning environment, children's interactions with peers and instructors, responses to questions, engagement in activities, and other relevant aspects of lessons. One-on-one audio-recorded semi-structured interviews took place in school buildings before and after lessons and activities, as well as during independent work time and breaks. Photos were taken of children-created materials/posters/work samples centering on topics such as local food, agriculture, nutrition knowledge, and sustainability. When it was necessary to capture images of children engaged in activities to support data description, I only took photos from behind or of children's hands only, ensuring that faces were either not visible or were blurred to protect anonymity. To encourage conversation and prompt children's voices in this action research, visual arts were frequently used to make children's perspectives visible, connecting us with drawings and dialogues (Leavy, 2020) that illuminated their experiences and endeavors. Beyond this art method, we also took sensory walks (Hammarsten, 2024) to scavenger hunt for any real-world signs or environmental print about food in the school. Responding to the photos, visual arts, and sensory walks, children were engaged in conversations about local food and sustainability both during and upon reflecting on their learning. Open-ended brief directions asking children to draw depictions of their various meals were given to them before they started their drawings (Figure 2 and 3). After several weeks of the summer program, these activities were used to capture child-centered data as well as to avoid biasing the results with the researcher's preconceptions. With the

support of the program instructors, children directly interacted with local agricultural practices, such as grinding wheat, milking a model dairy cow, propagating their own potato plant, and sampling various milks with differing degrees of fat content. I guided the children through these interactive activities to observe their knowledge acquisition and hear their ideas. My emphasis on openness to children's voices is not just an approach to data collection, but a recognition of their agency and participation as equal partners in embracing new thoughts, the not-yet-known, and new ways of understanding (Davies, 2014) in the action research.

Data analysis and accountability

As I approached data analysis, my expectation was to construct meaning with the data collected with my child participants to notice important themes, issues, or opportunities in advocating actions for food sustainability in rural Idaho and beyond. In the interpretative process, children's drawings, interviews, quotes, and fieldnotes were read and analyzed thematically through critical reflection. Data was then examined, grouped, and sorted to develop themes, producing categories of connected perspectives pointed to multiple meanings of patterns (Denzin & Lincoln, 2000; 2003). The intersections among ideas and concepts that emerged across the various data sources were further compared and contrasted for establishing contextual relationships and matrices (Maxwell, 2013). As a result, these conclusions assisted me in developing a more cohesive interpretation of the data. Following this procedure, two themes have been identified and displayed: children making informed food choices and children acting to support food sustainability.

Throughout the initial analysis, children acted as co-researchers to share their insights

when analyzing the drawings they created and the reflections they responded to after the local food exploration activities. Although these children were not involved in reading the interview transcripts and my field observational notes, their active participation with the data supported both the development of themes and the credibility of analysis. Being the researcher, I served more like a “translator” of my child participants’ words and actions while facilitating the collaborative meaning construction that is grounded in children’s experiences of food knowledge. This child-led action allowed me to reflexively reconsider my relationship with child participants, particularly addressing the shift of power dynamics between us. My self-reflection or reflexivity, in this stage, also acted as a tool for checking my own biases/assumptions, thereby simultaneously enhancing the rigor of the research. For the purpose of improving research trustworthiness, a dialogical engagement strategy has been utilized. By talking with the supporting paraprofessionals about the analysis, I gathered their feedback and (re)visited the children’s insight entrusted to me; these conversations also enriched the multiple layers of meaning revealed in our research in order to increase accountability.

Findings and Discussion

Children making informed food choices through local understanding

As I observed in the field work, children actively learned various local food sources and incorporated their knowledge of agriculture to make more informed and conscious dietary decisions. With the support of the Idaho Farm Bureau and instructors from our program, children experienced how local agriculture could be moved to the classroom. In one of the

summer sessions, we gave each child a bundle of wheat harvested from the local farms. These children gathered around as they closely observed the golden kernels of wheat, touched and smelled the grains, noticing their shape and texture. Before more activities started, we convened children to conduct a shared reading practice by reading aloud a big book on wheat. During the interactive read aloud, children built more fundamental knowledge about how, when, and where wheat is planted, as well as other information on its heritage and how it grows from a tiny seed to a world-shaping crop. Then, one by one, they took turns to manually grind the wheat into powder (Figure 1). After this, the children used their freshly made flour to make pancakes, raising appreciation for local food and agriculture development. When asked their takeaways from this experience, Evan replied, “This is so much fun. I really enjoyed making pancakes by ourselves.” Peggie commented, “The pancakes are yummy! And we made it!” When making pancakes with the flour they grinded, the kitchen was full of laughter, stories, and inquiries. Located in one of the most productive wheat growing counties in the U.S., this community-driven engagement connected children to their local agricultural traditions to dynamically enhance the place-based learning in food. To deepen children’s understanding, we also introduced the concept of whole wheat and its nutritional value to the human diet.

Figure 1. Children collaborated to use their hands to grind the wheat into flour.



Besides wheat exploration, children were also exposed to other learning opportunities to construct their own understanding of the local food system. For example, they joined educational workshops about Idaho potatoes, discovering that potatoes are much more than fries. They observed the potato plants and tubers, learned its nutrition and cultural traditions, and experimented sprouting potatoes. Incorporating multimodal literacies by watching Idaho agriculture animated shorts, children processed the diversity of local agricultural foods which may inform their dietary choices. Furthermore, in line with this goal, a network of local producers was created to foster direct relationships with farms nearby, ensuring local food-to-school

meals collaboration. During the harvest season in fall, we increased children's access and consumption of local food products by delivering them fresh fruits and vegetables, such as baby cucumbers, peaches, cherry tomatoes, pears, raspberries, blueberries, grapes, apples, and carrots. Accompanying the food delivery, brochures that contained fun facts about each food and interactive, age-appropriate cross-disciplinary activities were sent out to students. Since the study area is located within "the pea and lentil capital of the world," we also provided soup and hummus kits to involve children in cooking. This may lead to a greater liking for meals and increased intake of healthy food (Radtke et al., 2019) from local producers during the rest and planting seasons. Due to such distribution, children's local food immersion has been extended to the full year, capturing the four seasons of farming. While the logistics of the school's tightly scheduled daily routines make it challenging to conduct the field study during the school year, more in-depth observations and interviews have been and will continue to be conducted during the summer to revisit children's food consumption practices and sustainability awareness.

Emerging from this local food systems learning, children's increased knowledge of food and balanced diets are demonstrated in the interviews. In a conversation with Ben, he talked about his viewpoints regarding his food choices:

Author: What are some foods you like to eat?

Ben: I like broccoli and steak.

Author: What else? Do you love the fresh local food we dropped off at your class?

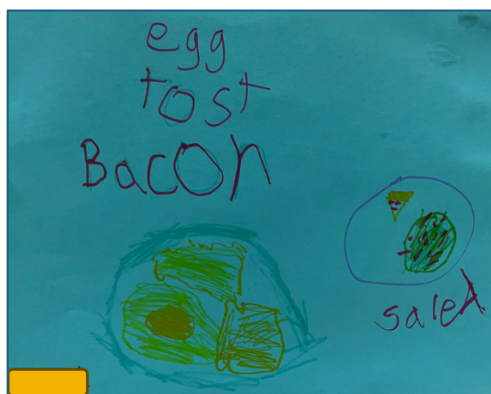
Ben: Egg burgers. Hmm, I like tomatoes a little. They're not my favorite fruits, but if you put them in front of me, I just don't want to waste [them].

Author: Do you love fruits?

Ben: Fruits? I like apples, bananas, pears, peaches. Basically, any fruit that you put in front of me, I'll eat... But sometimes my dad makes... Sometimes I've got a championship game coming up, like a baseball game. So sometimes I put two raw eggs in a jar and then I eat them. It puts a lot of protein in me... I use all that protein up because I'm running so fast.

It is apparent that Ben acknowledged the significance of intaking protein to keep up his energy, as he identified himself as an active "sport kid" who loves soccer, baseball, running, and more. Although he believed that he was not a big fan of vegetables, he understood the role of a balanced diet, which can be seen in his artwork illustrating his breakfast (Figure 2).

Figure 2. Ben expressed his understanding of balanced nutrition.



Ann, a girl whose family owns a farm, shared her thoughts about local food systems and her food selections.

Author: Have you ever been to any local farms?

Ann: I've been to my dad's farm. It's actually like a farming farm.

Author: That's awesome. Thanks for telling me that. What food do you like to eat, especially the local food we tasted in this program?

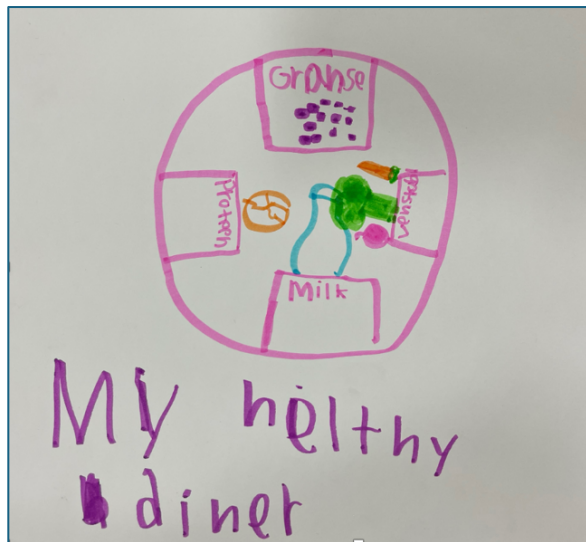
Ann: Cherries, carrots, blueberries, tangerines, oranges.

Author: How about the lentil soup kits? Have you tried that?

Ann: It's yummy. My mom put cheese in it. They are soft.

During this conversation, Ann and I walked around the building to locate any environmental print about food. She observed bulletin boards that invited children to build a complete meal by selecting from at least 2-3 essential food groups and local foods for daily energy expenditure. Reflecting on this sensory walk and previous food activities, Ann created her plate of dinner (Figure 3) with a detailed introduction of why she chose these foods. She pointed to each part of her drawing and stated that "I need the protein, grains, milk, broccolis, carrots, tomatoes. They make me healthy." When I asked Ann about her feelings of eating local food, she responded that "I feel grateful and happy."

Figure 3. Ann used art and literacy to share her dietary choices for dinner.



Building upon the various food explorations, these young children expressed their understanding of food choices that emphasized how and why a balanced diet is important to sustain their daily living. Local foods, to these children, are not just what they see in markets or the displayed information in school curricula, but are tightly associated with the places, people, and their lived experiences (Schafft & Jackson, 2010). Having acknowledged this, therefore, the place-conscious agricultural learning reflected in these children's participation is transferable to their classrooms, homes, and communities. In the food world, awareness surrounds what is local and seasonal (Franzen & Peters, 2019); accordingly, by delving into these local foods through literacy, agriculture, and other content areas, children are led along paths of adventure in the place they live. This is the case for rural children who reexamined their home environment in tangible and valuable ways, then they were encouraged to think beyond the physical space to recognize how this place held special meanings in supporting food security and nutritional

awareness (Azano et al., 2021). When the children thought of the place, they remembered the beautiful Palouse landscape with different crops that change throughout the seasons, the golden wheat that becomes flour to make delicious baked goods, the smell and texture of the local foods that are harvested from the farms nearby, and many more connections between their environment and the food they consume. Their sense of place and community developed as they gained firsthand understanding of where their food comes from; this helps them appreciate local agriculture's impact on food security.

Children acting to support food sustainability

To better comprehend their perspectives on food sustainability, I invited children to talk about the management of food waste in relation to food choices. In our dialogue, children proposed ideas for preventing food waste. As I approached the initial data review, they also spontaneously collaborated as co-researchers to identify their actions advocating for eco-friendly habits. Thus, the second theme of the findings emerged in the ongoing process of embracing children's voices in the study. Interacting with children in multiple conversations and literacy practices, they continued to construct meanings of food transformation, in turn, empowering them to uphold social responsibility.

Vignette 1. In the first finding, although Ben showed preference to eat more protein to keep up his intensive physical activity, it was evident that he was concerned about food leftovers that might cause waste. For instance, as Ben mentioned in the previous interview, "They're not my favorite fruits, but if you put it in front of me, I just don't want to waste [them]."

We then conducted a follow-up interview to know more about his opinions and feelings:

Author: What are your thoughts about food waste?

Ben: Bad thing.

Author: Why it's bad?

Ben: Because it really does not help. It doesn't help. It doesn't help. Nature does not help. It doesn't help the environment. And it really pollutes the area, too.

Author: What are some solutions to prevent food waste?

Ben: Eat up all the stuff that you have. If you waste it, you really don't want to waste stuff because it's really bad for the Earth if you don't eat all of it, if you don't eat all your dinner.

Author: Yes. What else? What if there are some leftovers if it's hard to eat them all?

(He saw a fish on a picture of a cookbook for the kids, pointing to the fish and said)

Ben: I think if you cut off the [fish] head, if you have dogs or cats, feed it to your dogs and cats because then it won't pollute the area, and they would also eat.

Vignette 2. Evan and I were in a semi-structured interview centering on his thoughts about food choices. Based on his understanding of a balanced diet, Evan drew a picture of his breakfast, labelling the protein, dairy, vegetables, and fruits, and he even marked the

hash browns as carbohydrate content. Following his artwork, Evan looked at the drawing, thought for a while and explained:

... Sometimes my dad accidentally makes [the food] spicy, and he knows I get diarrhea when I eat too much of the spicy thing. So he just tells me, I throw it away whenever I like. Oh, but plus, milk and yogurt can be a solution for spicy food. Oh, yeah. Because milk cures the spice. If you just accidentally put too much spicy stuff in a [pot], you just get some milk... If you accidentally eat a ghost pepper... (He giggled and repeated "ghost pepper" with an expression of eating spicy food).

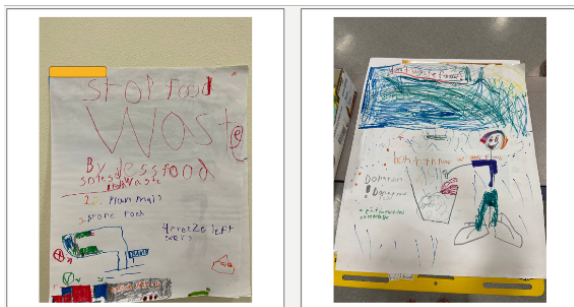
I then asked if he had any other thoughts to share with me. Evan replied, "about everything that's wrong with the world. How [much] food is wasted? It's like you just want to fix that."

Listening to these children's voices, I noticed that they realized the problems with food waste and actively brainstormed possible actions. Bearing in mind that food waste is not just a local issue, the foundations of decision making from children's awareness around food conservation could be one of the steps to improve environmental sustainability. Informed by this "thinking aloud" experience, these children performed agency to reconsider how food is valued, reflecting on our relationship with waste (Pacini-Ketchabaw & MacAlpine, 2025). We admitted that food waste prevention is a complex, dynamic process (Makhal et al., 2021). Children's participation following a series of place-based and literacy engagement, at least, brought them opportunities and possibilities to take food waste seriously as they transformed viewpoints upon this topic across time. In other words, we did not avoid the complicated reasons

that cause waste, but young children's willingness to embody this advocacy should be highly encouraged and recognized.

More actions have been implemented voluntarily by my child participants. Below are the two posters (Figure 4) they created showing that children moved beyond being passive recipients of information regarding food waste to contributing to advocacy efforts via literacy involvement. The first poster was composed by Tim, Ben, and Oscar. Before jotting down any solutions, I observed that this group of children supported each other by exchanging ideas, allocating tasks, roughly designing spaces for writing, as well as articulating their reasoning behind their chosen resolutions. The second poster, on the right side and made by the group that included Peggie and Evan, manifests their ponderings on food waste, with bullet points such as "donate your food" and "eat the weird [shaped] vegetable."

Figure 4. Children collaboratively drafted posters to advocate for food waste prevention.



Literacy practices facilitated and made space for children's action-oriented engagement in food waste prevention. It is worth emphasizing that children sought to suggest potential strategies to reduce food refuse, as noted by the emergence of early writing on these posters. While there were invented spellings in their expressions, the key meanings have been

clearly conveyed through the semiotic resources of communication (Green & Corbett, 2013). These literacy products present another way of considering literacy, addressing the social dimensions of meaning-making within specific contexts—that is, literacy as part of children's collaborative process of constructing meaning in real-world situations (Gee, 2018; Corbett & Donehower, 2017). In this particular scenario, the focus was not on judging their emergent writing skills; rather, their interaction-based literacy practices functioned as useful tools in authoring their advocacy against food waste. It was the moment to celebrate young children's exploration of socio-environmental topics that matter to them, which strengthened the significance of their efforts in developing social literacy.

Not only did children learn about the social functions of literacy in these action-based activities, but their literary responses to making informed local food choices underline how children practiced place-conscious literacy close to home (Azano et al., 2021; Donehower et al., 2007). Their commitment to rural literacy advanced the reciprocal relationship between local food sources and global food waste issues. Children learned which local foods are available, how they can build a balanced diet with these foods, and in what ways their food selections could potentially reduce food waste. The feasible solutions they thought about are compelling evidence of active civic participation that bridged local-global connections through literacies. Significantly, children identified place-related topics that are important to sustain life in rural spaces. Thus, the literacy-to-place connections (Becerra Posada & Ehret, 2024) further shed light on implications in local food education now and in the future (Eppley, 2017). Despite ecologies of food choices being highly contextualized and influenced by cultural

factors, raising this kind of consciousness and involving children in place-based work holds promise for flourishing food sustainability in an uncertain future.

Closing Thoughts

Through place-conscious pedagogies, the children in this study made meaningful connections around food choices, practiced higher-level thinking skills, and conducted in-depth exploration of experimental projects addressing food topics within their communities. Their practice of rural literacies has become a powerful filter for understanding the juncture between healthy food choices and food waste prevention. As these young children awakened awareness for building local food communities with rural knowledge, they acted up to contribute to global food sustainability. It is my hope that this study invites larger audiences who are dedicated to ECEC values to foster food security and defend food sustainability with children's involvement to rethink the implications of navigating uncertainties in the ever-moving present and future. The multilayered discussion, guided by the reflective and advocative practice of children, could be helpful in other community-driven work that increases the visibility and transparency of place-based learning.

Although this study is small-scale, the wonders and insights collected from researching with children will continue to be explored beyond the scope of this paper. I see this research as ongoing, dynamic, and emergent while embracing recurrent enrichment. Accordingly, the research is scheduled to continue into summer 2027, as my communication and collaboration with the school remain consistent. These ongoing efforts

are intended to support the continued development of children's holistic understanding of local food systems. If permission is granted, these children will be invited back and more will be recruited for the next iteration of the program, calling for further action to make a change in alleviating food insecurity and promoting food sustainability.

As we continue this work, I will invite my child participants as co-researchers to reflect on their ongoing understandings of food choices and sustainability, share stories and food-related learning experiences, and brainstorm the directions their curiosity may take regarding local food systems and their connections to food sustainability. I would also contact the paraprofessionals we worked with last summer, who may provide more updated information about food-based lessons and curriculum. Questions that will guide me in further discovery are: What innovative approaches can we adopt to better hear the voices of children and to encourage their participation as active co-researchers? How to deepen and expand the application of rural literacies as a tool or a portal to practice more inter-disciplinary and cross-disciplinary exploration around food knowledge? Moreover, inspired by Panici-Ketchabaw and MacAlpine (2025), we plan to engage young children experimentation with food waste to open more discussions, activities, and advocacies on food sustainability amid an unpredictable future. As Sumner (2016) claims, "Learning and food are central to human existence. Learning helps us to survive and evolve as a species, while food provides us with the glue that holds our survival together" (p. xix). To close this paper, I would like to share a poem by E. E. Cummings that evokes the joyful sensory moments of eating "homemade" pancakes with my child participants. Our

journey to make local food visible will continue.

Oh, how happy we are

to be here together!

With a pancake

on our plates,

The sweet syrup flows,

dripping down,

a golden river

on our plates.

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