

## A Social Action Narrative: Case Study of a Community Orchard/Living Classroom

### **Dr. James Barbre**

Associate Professor of Education  
346 Tom Raper Hall  
2325 Chester Blvd  
School of Education  
Indiana University East  
Email: [jbarbre@iu.edu](mailto:jbarbre@iu.edu)

### **Amber Hall**

Lecturer in Education  
358 Tom Raper Hall  
2325 Chester Blvd  
School of Education  
Indiana University East  
Email: [amlhall@iu.edu](mailto:amlhall@iu.edu)

### **Abstract**

*The benefits stemming from outdoor science education are considered received wisdom in student learning. Effectively combining these with community drives toward general improvement have the opportunity of developing interesting projects and initiatives. The narrative from the project of the Mary Scott Community Orchard project approach toward the goal of community improvement is both unique and highly replicable. Partnerships and collaborations facilitated between schools, local businesses, local and state agencies, and higher education have produced a unique living classroom and open-access community orchard. Teachers and students were essential actors in this project and acted as agents of active social change. This narrative will describe that experience and the intentional, yet practical educational underpinnings embedded in developing an interactive experience teaching people more about their environment and growing food.*

**Keywords:** social action, service learning, outdoor learning, community improvement, living classroom, science education,

### **1. Introduction**

In this article, we will discuss the Mary Scott Community Orchard; its genesis, process of development, lessons learned, and the open-ended outcomes that resulted. More importantly, we will seek to highlight the many contributions along the way. For this open-access community orchard project, there was certainly a plan, but also a lack of experiential preparation. This turned into a positive feature for this project and offered numerous improvements along the way. These improvements occurred for one reason: the conscious decision was made to listen every step of the way and to ask many questions, instead of simply defending a singular way of accomplishing a stated goal. The advantage of this approach lies in the broad means for how it can be applied across different circumstances and situations, because it offers the advantage of fluidity of thinking and adaptability in action. In doing so, the participant, or spectator, begins to understand the value of giving to something greater than themselves.

Social action was born of inquiries into existing social conditions and the value structures they represent. When anyone invests the time, energy, and resources to continuously develop ourselves, what is the reward for the effort? Are we seeking a credential or professional standing, or are we learning ways to better connect to our surroundings? And in doing so, effect a change in thinking and the resulting values which accompany it. We will argue that the concept and actions of social action are never to esteem the one, but the many. No one person, no matter their level of education or expertise can ever ‘deliver the goods’ solely on their own. Building community is a multidimensional effort that thrives on the strengths that different individuals or groups bring to the table, regardless of the scale of impact. Weil (1996) addresses this level of intersectionality by arguing that “*community building* refers to activities, practices, and policies that support and foster positive connections among individuals, groups, organizations, neighborhoods, and geographic and functional communities. The Committee for Economic Development (1995) defined community building as “an ongoing comprehensive effort that strengthens the norms, supports, and problem-solving resources of the community (p. 3)” (p. 482). It is never the one, but the many.

## **2. Social Action as a Process and Outcome**

Social action has multiple meanings, even though it represents a broader approach to action and advocacy. To engage in the process of social action, one must be informed on the one hand, but also an avid learner and listener on the other. With this, preparation becomes important in achieving the desired outcome, yet it is never enough. Dewey (1938) reminds us of the ‘treacherous nature of preparation. In being educated, we should not be content with learning discrete amounts of any subject, be it math, history, geography, or any other. Any education must enable the learner to consider the acquisition of learned skills to be both dynamic and expansive and so suited to inevitable changes that come with the future. This is the meaning of the growth and continuity of continuously reconstructed experience. Recalling ‘how it was when I learned it’ is not enough.

Through the years, social action has taken different forms and approaches, yet possessing similar mechanisms and ends, namely the underlying improvement of the human condition. Dating back to 1856, social action was argued as necessary in order to provide for the ‘deaf, dumb, and blind’ (Pim, 1864). It was also argued that education, as a general social end, was necessary to safeguard the populace from developing criminal behavior (1864). Though seen as timely for its day, the inelegant articulation of these beliefs, by modern standards, underscores an important sentiment in that the improvement of our general condition lies in thinking of everyone and listening to everyone. High-minded sentiments such as these paint a picture of charity and good will by an influential few to those seen as disadvantaged. We consider this uninformed and narrow thinking.

An inherent challenge with a singular definition of social action is that it becomes subject to the context in which it occurs. For this reason, social action takes on a unique, but familiar set of meanings when applied to issues of social equality, racial equality, gender equality, human rights, socioeconomic equality, gay rights, gender identity, and numerous others in the lives of people. Perhaps this is both a strength and limitation of becoming an expert in any given field. Thinking across the different boundaries of our social lives, it would be easy to sum up the sentiment that ‘we all do what we can’ and call that enough, but it simply isn’t. Collective human interaction requires shared intentionality (Heeson, Genty, Rossano, Zuberhuler, and Bangerter, 2017). Quoting Levinson (2006), Heeson et al. reminds us that “human interaction belongs in an interdisciplinary no-man’s land: it belongs equally to anthropology, sociology, biology, psychology, ethology, but is owned by none of them!” (p. 39).

Our particular field is teacher education. At a point in the not-too-distant past, it was considered essential for educators to develop a broad understanding for the reasons and means of educational experience and the value of represented by the overall outcome (Barbre, 2018). In considering the ‘essential profession’, understanding and making sense of the underlying rationale that guides the larger enterprise of schooling and education requires us to think specifically, but apply this thinking and understanding in broader terms. Modern schools are characterized by a curriculum and teaching methodology that is mostly discreet and prescriptive in terms of its subjects and outcomes. Math is math, and science is science. Social studies is history, and the study of English is the study of English. We do not find this reductionist approach useful, but with the onslaught of standardized testing, pre-packaged curricula, and modern methods of teacher accountability, perhaps it was/is an inevitability and has brought us to this way of thinking.

Students often emerge from their secondary education years proficient in the mechanics and exercises of education, but can be reluctant to venture their opinions and experiences, for fear of offering the ‘wrong answer.’ This

represents the technical form of thinking, but what about the ability to understand and appreciate the diverse nature of application or aspiration? Teaching essential components of diversity has always been interesting and teachers are regularly challenged, if they are listening, by the dissimilarities between their own experiences and those of their students. The skill and ability to listen and observe from a non-judgmental perspective provides its own mechanism for growth through introspection. As a part of our approach to diversity, our school utilizes Christine Bennett's framework for multicultural education (2018). There are six features to this framework: 1) Developing multiple historical perspectives, 2) developing intercultural consciousness, 3) developing intercultural competence, 4) combatting racism, sexism, and other forms of prejudice, 5) developing an awareness of the state of the plant, and 6) developing social action skills.

### ***3.A Community Orchard/Living Classroom: The Inception of An Idea***

In the fall of 2018, a parks department memorandum was circulated across a number of offices in our medium-sized midwestern community, both public and private. The memo addressed an ongoing campaign to re-vitalize the city parks and make them more inviting to residents of our community and visitors from the surrounding areas. Listed in the memo were at least fifty ideas for how these public spaces might be made more attractive and facilitate greater interaction by residents with the outdoors. Coming across 'community orchard,' and followed by a conversation with the dean, what would become a two-and-a-half year pursuit of development and action began.

Being career educators, our experiences are full of advocacy in different ways and on different levels. We entered this profession because of a belief that what it represents offers the most valuable kind of relationship between humans as social beings; interaction, dialogue, and cross-experiential learning. Working to empower our students, we talk to them, provide feedback to their ideas, and offer them something to consider going forward. This is an example of that process occurring somewhat in reverse. We cannot all be full-time activists, but we can be active on our own by "engaging in practice, rather than being its object, [this] may well be a condition for effective learning" (Ollis, 2011, p. 255).

### ***4. Student Learning Outcomes and Educational Standards***

Educational standards and student learning outcomes are indelibly woven into the profession of education. Having high standards has never been the issue, but the culture and DNA of education has been overly reliant on them in ways that can be counterproductive (Robinson, 2012). While many standards are process-oriented, the presence of standardized testing and the slew of minutiae that accompany them can be dis-heartening to the desired outcomes of an education. After all, there are only so many hours in the day and the drive toward test-readiness takes the lion's share of educational attention. Teachers are not fans of this approach, rather it is the system they come to be a part of and the one which they continuously wrestle with their often deeply held convictions about the virtue and value of education.

Following up on the memo from the parks department, a meeting was scheduled with the Parks Superintendent to inquire on the seriousness of what had been written. She was very serious and a consummate professional. Leaving this brief meeting, the project leader contacted several educators in the community and explained the idea of a community orchard and how it could intersect with the goals and purpose of an outdoor/living classroom, asking them if they believed the idea had merit and, if so, whether they would be interested in participating in this larger project. Each was quite receptive to the idea, if for no other immediate reason than it would make an excellent addition to our community. One of the teachers, a science teacher and instructional coach, was especially impressed by the idea and cited several educational standards that would directly apply to the project and the overt value of learning outdoors.

### ***5. We Have a Plan, But Not the Whole Plan***

Taking this idea and studying it further, it became apparent that it could be expanded. The orchard site is located within walking distance of three schools in our community. It is also located two blocks from public housing and at the edge of a local food desert. Through a report commissioned by the Parks Department, separate areas of Richmond were evaluated for the ease of food access. In an urban setting, a food desert is the result when a person lives at least one mile from the closest grocery store. In our community, a number of residents do not have cars or ready access to transportation. From this, options for food access can be limited, and often one must go to a local convenience store to obtain something to eat. This invites higher consumption levels of processed foods and adds

to health and other problems that may be experienced over extended periods, not to mention the default nutritional habits the situation instills, thus becoming a cycle.

With this point of awareness, the plan became more than the development of an outdoor living classroom, but one providing free access to community residents. As the plan evolved to include finer details, the essential nature of ‘buy-in’ showed itself as a crucial feature, and not simply for the workload involved. Investing in one’s community is only of value if an equal, if not larger, investment occurs with the younger generation. After all, they will be the ones to assume the reins of leadership when the older generation is gone. We also consider it important that younger generations see value in what we do, regardless of the particular project. Without this, the possibility exists that they may not care, or treat it as ‘just another thing’ that adults are doing to or for them. While it may be an imprecise way to think about it, this is a dangerous relationship in that it can develop into client/provider thinking. This kind of relationship is asymmetrical in nature and most, if not all, of the power exists on the side of the provider. Students had to be involved in this from the very beginning.

An important component and process of this project took the form of continuous conversations with individuals with various areas of expertise in order to achieve joint action, or what we have referred to previously as ‘shared intentionality.’ Without shared intentionality, the project’s goals would never be realized. According to Heeson, et al., “joint action involves two or more individuals collaborating to achieve a shared goal, often corresponding to an outcome that no individual could attain alone” (2017, pg. 391). This included teachers, students, experts of greenhouses, experienced apple cultivars, members of the business community, university experts, community members, experienced and amateur gardeners, and others too numerous to name. This necessitated the ongoing feature of reciprocal learning in the pursuit of service. Reynolds (2009) states that “It is this element of reciprocity that moves service learning to the level of a philosophy, “an expression of values—service to others, community development and empowerment, reciprocal learning—which determines the purpose, nature and process of social and educational exchange between learners (students) and the people they serve” (p. 4).

As described earlier, an examination of social action always reveals that efforts are embedded within context. While the goals of this project were always educational in nature, the necessary aesthetic accompanying any community experience is key. One of the challenges in social action and service is the manner of translation between intent and outcome. For the younger generation to be invested in making the community, or world, a better place and not feel as though they are merely spectators of the process, their presence and input along the way must be encouraged and valued. We do not say this from the perspective of the adults agreeing to listen to the kids, but rather the fact that everyone has excellent ideas to offer. If they are willing to share these ideas and know they are welcome, there will always be something new to consider and we grownups can stop talking and directing.

## ***6. The Design***

The design for the orchard evolved slightly over time from strictly apple trees to a combination of different apple varieties, berry plants, and a pollinator garden. Contacting the University Extension Office, the project was put in contact with an expert in the field. Some referred to him as the ‘Apple Czar’ of Indiana. Through discussions with him and meeting with local Apple farmers, it became clear that certain varieties of dwarf apple trees would be preferable. Dwarf trees offer the advantage of being able to walk up and pick the fruit, as opposed to needing a ladder for the tops of the plant. The choice of different apple varieties came from the various tastes that apple varieties offer, as well as maximizing the harvest across the growing seasons. The decision was made to pursue a particular form of tree growth: Espalier. This came from a passing conversation with a colleague in describing the nature and needs of dwarf apple trees, and proved essential to the design. “Have you ever heard of Espalier-style growing?” “No, can you tell me more?” This conversation proved to be pivotal to the design of the space. Espalier methods tie the plant to a fence and the branches will grow laterally. This maximizes the sun exposure, but also supports the trees, as dwarf trees cannot support their own fruit for several years. With advice from another expert in the field of berry plants, the varieties of berry plants were chosen for their heartiness, but also for the tastes that each fruit offered and the possibilities of use in cooking or canning, and ultimately in the curriculum. With the presence of a trellis, it would be easier to pick the berries as one walks through the orchard; a key design in food deserts.

The pollinator garden evolved from its original design when contacted by a colleague affiliated with the Indiana Audubon Society. A lifelong aficionado of nature, observed that certain pollinator plants would work better in this

region than a randomly-chosen hodge-podge of different flowers. He offered his expertise in connecting the project with an appropriate vendor and worked to design the larger space. Examining the plants further and aligning their choice to the existing educational standards of Indiana proved valuable. This was a definitive improvement from the original generic design for a pollinator garden; all through listening and asking questions. Continued conversations with the manager of a local nursery helped with the design and installation of a drip irrigation system to help the orchard remain viable and healthy into the future.

### ***7. Essential Partnerships***

Working with the city and drawing on the expertise of numerous civic entities proved to be a valuable and educative experience and the project connected to people and offices with substantial perspectives and questions to offer. City officials were receptive and engaged and also raised difficult questions, all of which had to be addressed and considered. The experience and interactions with business leaders in the community proved an invaluable asset in that they helped filter the ‘ideal’ into the ‘real’, which proved even better.

This process was not without its setbacks. Several area businesses declined or were not interested, and it became clear that pitching a brand new idea in any community had its own challenges. Some are comfortable with new ideas, while others may be in favor of the status quo. Investing resources and support into ideas is a calculated decision. This is not a cynical observation, rather the opposite. A new idea in any given area must pass through certain levels of scrutiny, all born of experience. One of the challenges in collaborating to do something innovative and bold is the assumption of acceptance for the implicit value of the project. This is not always the case and when it is not, we are challenged to refine our arguments and plans and address valid concerns that would otherwise be attractive to overlook or forego entirely. Again, the idea of listening to everyone becomes important.

### ***8. The Campaign***

The project was put in contact with the Indiana Housing and Community Development Authority (IHCDA) and the crowdfunding platform ‘Patronicity.com’. Discussions with the representatives of these organizations showed that the means of fundraising has evolved significantly over time. Utilizing the expertise of Patronicity.com, a campaign and timeline was planned. A Facebook page was developed and a plan for important information to be shared was strategized. The Facebook page was regularly updated and shared, but did not initially receive the expected attention.

The representative from Patronicity, served as the point of contact for the project. Consistent contact provided ‘best practices’ for crowdfunding. Though slow at first, she was a responsive professional when questions needed to be asked. These partnerships become crucial when one may feel they have reached the limit of known skillsets.

A colleague from the university contacted the campaign when she saw the Facebook page. The page was slowly getting more likes and shares, but limited in its general circulation and only reaching a smaller group of people. Conversations proved to be essential in moving forward, first with the suggestion of a logo and a particular strategy for posting content. The campaign welcomed this feedback and she took the social media helm for the duration of the fundraising campaign, with an essential component being local outreach and increasing overall awareness of the project.

The Superintendent of the Parks Department encouraged access to a local farmer’s market through the Parks Department provided a venue for publicity. We gathered necessary materials in the form of posters and flyers and set up a booth. For those who have not done something like this before, this can be a very intimidating moment in time. When one is set up and expects passersby to stop with their questions, yet they do not, we may be left to wonder. One hour into the first day of our farmer’s market booth, a colleague walked up waving a check in her hand! The benefit from her visit cannot be overstated. It was not solely the amount on the check, but rather that she had taken the time. She lingered at the booth for several minutes asking questions and spoke uncharacteristically loudly. She would lean in and point to different posters or graphs we had, all the while. Retrospectively, we believe this was intentional since this interaction drew attention to the booth in a way that made other passersby curious, and many stopped to ask their own questions. What is the value in this? As stated previously, in fostering change we have to work on our arguments and judge their success through the observable nature of people’s reactions, or their questions. With this, a mechanism of continuous refinement is put into place and this awareness and energy carries you forward. This becomes essential because different people require different methods of persuasion. The

value of the ‘elevator speech’ has been proven through time, but it changes when you are promoting a project that is open-ended and of service to everyone and doing it as many times as possible in a public space.

A few weeks later, the dean from the school brought his guitar down and we did some impromptu busking in order to draw attention to the booth. Looking around at people passing by, he looked over and said, “This will work. You’re doing what you need to do.” At this point, and in the weeks following, it became a regular occurrence for people to walk by and donate a \$20 dollar bill to the campaign, or at least ask about it. We had t-shirts and bumper stickers to hand out, but they mostly wished us good luck and looked forward to hearing more about it in the months that followed. Through the farmer’s market, the Executive Director from a local television station invited me on the show to discuss the project. This experience proved vital for reasons of getting the message out, but also in helping to further refine the argument. Earlier in the campaign, the school head of a local private school and host of his own radio show, invited a discussion on the air earlier in the campaign. With a spirited discussion and lots of questions, the voice of the campaign was instantly multiplied!

Several months of a consistent presence at the farmer’s market accompanied by equally regular updates of the campaign’s Facebook page were integral to the strategy. Through this time, we assembled video footage of the campaign and asked the teachers involved if they would contribute a message. The parks superintendent brought the campaign to the mayor’s attention, and he also provided a video announcement. Throughout this time, we were working with Patronicity and the IHCDA for a matching grant.

A separate foundation in our community provided the funding to acquire necessary tools for the installation and its upkeep. The Reid Health Foundation advocates for healthier lifestyles and choices and their excitement at the educational connection for this space was essential. Continuous visits with as many people as would listen, which included churches in the community. The pastor of a local Quaker gathering invited a presentation and several people became interested and donated, as well. A steady number of friends and followers shared and continued to share and re-share the postings.

With a couple of weeks left in the campaign, another morning talk show host at another local radio station, invited me for a short morning interview during the morning show. On October 14, 2019, we came to the end of the campaign. Raising the needed amount qualified us for a matching grant with the IHCDA. The campaign needed to raise \$17,500.00 and crossed the finish line by raising \$17,701.00 and qualified for a \$17,500.00 matching grant. Following the end of the campaign, we were able to turn attention more to the specifics of the project itself. Having received continuous feedback on the choice of fruit-bearing plants and pollinator plants, it seemed the project was ready to go.

## **9. COVID-19**

Most remember the initial days and weeks when COVID-19 came to bear on their lives and livelihoods. Schools across our community shut their doors and immediately engaged in remote teaching and learning. This included our own university and Richmond Community Schools. With no end in sight at that particular time, concerns arose as to completion of the project and installation of the orchard, as it was originally envisioned. In working with the requirements of any grant, there are always deadlines for completion of the project; COVID greatly complicated this. When events like this occur, it may be common for those involved in the project to decline further participation. It is not for selfish reasons, but rather the nature of the job has changed. During this time teachers had to formulate significantly different means in delivering high quality teaching. With massive re-planning and a strain on school resources, it was a time for ‘all hands-on deck.’

It was in this context that the campaign approached the teacher partners of the project. Without hesitation, everyone was still on board, regardless of any shift in the timeline. With this information, we contacted the granting agencies of Patronicity and the IHCDA, explaining the situation. Their response was pragmatic, and a policy was developed that allowed for an extension of the original timeline, given the circumstances on the ground. During this time, the participation of other educators was solicited, one of which was a high school construction teacher. Explaining the nature of the project and the revised timeline, he agreed to bring his class and lend their talents to the project.

In the fall of 2020, a perimeter fence was installed at the orchard site and sat lonely through the winter. Some asked why a fence would be installed so far ahead of the actual installation date. In a project like this, it is important to show momentum and progress. After all, resources were invested and expertise contributed, and it would be remiss to put that off. During the spring of 2021 as the weather warmed, the construction class students came every day

for a week, even working through the rain. Under the guidance of their teacher, they measured, drilled, levelled, and cemented posts in place that would support the fencing for the espalier-style apple trees, trellis' for the berry plants, and frames to support the community artwork. Students were afforded the opportunity to contribute to a project that would benefit to the entire community. While this was not service learning in the strictest sense of the word, it was service to the community.

During and leading up to this time, continuous visits to businesses in the community led to a growing awareness of the project and an interest in supporting it. With this, and during the execution phase, several businesses offered their services pro bono. Bettencourt (2015) addresses the benefits students derive from these kinds of experiences. "Service learning (SL) is increasingly embraced across the K-16 spectrum due to its potential to extend students' learning beyond the classroom and launch them, either virtually or in face-to-face situations, into the world beyond. By means of these more challenging and meaningful experiences and relationships, it is believed that students have opportunities to increase their language skills, develop deeper cultural sensitivity, and apply knowledge from other content areas" (p. 473).

### **10. Earth Day 2021**

On Earth Day (April 21-22, 2021), the installation was scheduled. Unexpectedly, and to the chagrin of many involved, it snowed twice in the three days preceding the installation. At this point, the schedule was locked because of transportation issues with the school district and scheduling for the buses. Looking out the morning of April 21 and seeing snow falling to the ground once again, the feeling of being at the mercy of Mother Nature was palpable. None the less, a senior class of AP Biology students and their teacher arrived first and began helping to set up the workings for the day. Shortly afterwards, another teacher arrived with her class of social skills students, and the work began in earnest.

### **11. Applied Social Action and Pedagogy**

In the months following the installation, a local food council submitted a proposal for science kits to reinforce the use of this living classroom site. The funding purchased field kits, microscopes, and other equipment for students in two nearby schools. The provision for a learning or community space such as this must be reinforced through continuing support. Eighth grade students from a local school also worked to design a 'free little library' for the site; due to be installed in fall 2022. The roles were numerous with some being larger in scope and others, not quite as much. The importance of each role should not be assessed on its own, rather as cooperative contributions towards a larger whole. Now a resource is in place that will be available for years to come and those who participated in the process will have a place to look at and know that they did their part.

### **12. The Value of Outdoor Education**

So what is a living classroom? More importantly, what value does it provide? Many students and schools regularly attend outdoor sites where they study different components and processes of nature. Outdoor education has shown itself a high impact practice in that it reinforces a connection to nature and an appreciation for the spaces where we all reside. This is the point where the other skill sets come in. An appreciation of nature is one that must be fostered over time. Research has shown that time spent outdoors by students is minimal (Pfouts and Schultz, 2003). Going further, they make the case that "an outdoor learning center can provide rich learning opportunities often not experienced by children. By creating a habitat for small creatures, bugs, insects, and birds, children gain a chance to learn firsthand about the natural world. This, in turn, helps them experience science in context, allowing learners to incorporate science as an important part of their lives" (p. 57). Listed below are selected examples of particular educational opportunities for spaces such as this, all of which are based on existing educational standards:

- Students may compare and contrast structures in different plants that allow them to reproduce and thrive.
- Students can analyze the external structures of plants that enable their survival, behavior, growth, and reproduction.
- Students can analyze and observe plants to make a model that illustrates the movement of matter between plants and the environment.
- Students can observe the unique life cycles of different plants, including birth, reproduction, and death.
- Students can observe different plants as a means of comparing diversity in a given setting.

- Students can observe and record changes in different plants (i.e. pollinators and fruit-bearing plants) across the growing season and record the changes.
- Students can analyze and observe the unique features of blossoms from different species of fruit-bearing plants (i.e. apple trees and berry plants).
- Students may observe and construct models and arguments for meeting the diverse needs of plants in a given location.
- Students may observe native flora and fauna which are unique to their region.
- Students may record the number of blossoms per apple tree and predict the number of apples which will result.

The reader will note that these are focused primarily on science. Other subject areas, such as mathematics, English and literature, and social studies will be able to make their own uses for such a space.

An outdoor education presents a unique learning opportunity for teachers in all academic areas. Teaching is an inherently creative enterprise with a myriad of possible applications. English teachers can use the space for writing or composition purposes. Math teachers can utilize it for a range of instructional ends. Besides the fact that it presents an excellent aesthetic space, which carries its own value in learning. Reviewing the standards listed above only addresses specific connections up to the 8<sup>th</sup> grade. There are multiple student learning outcomes that are embedded in secondary and post-secondary settings. Additionally, the presence of service-learning possibilities affords an opportunity for high school students to meet service-learning requirements for graduation. At the post-secondary level, the Carnegie Community Engagement Classification provides a framework for colleges and universities to measure their engagement across their communities.

An important component in this approach lies in a significant degree of overlap across numerous areas, including sustainability education, outdoor education in developing a perspective toward environmental education (McKeowyn and Hopkins, 2003; Sauve', 2005; Eilam, 2010). Outdoor education is indelibly tied to sustainability education. Numerous well-designed parks and other spaces can be found across the community and offer numerous kinds of experiences; one may be connecting with the unfamiliar, and the other may serve the function of inspiration. Citing Dale and Newman (2005), Jeronen, Palmberg, & Yli-Panula (2017) assert that "Sustainable development education again is based particularly on environmental and ecological sciences and focuses on the interaction between ecological and social systems" (p. 2). It is within these public spaces that students and adults may cultivate a better understanding of the symbiotic relationship between communities and the living systems required to sustain us all. Most have access to the media which shows a glimpse of the sheer diversity in nature, but an orchard space provides an immediate example for a process that affects everyone in the world. Nielson and Ma (2018) make the case that "...the (re)discovery of the social and natural ecologies that bind us together, and of how explicit teaching and learning about these ecologies can make a difference to young people's abilities to consciously be part of, contribute to, and sustain these ecologies" (p. 215). "The concept of affordances could also explain how the availability of natural or organic 'loose parts', such as leaves, twigs, grass and stones, can enhance children's imaginative play (Franklin 2008) These materials are usually abundant, easily collected, carried, and shared, and have what could be characterized as 'abstract' properties that lend themselves to imaginative transformation. This makes them ideal resources for groups of children engaged in pretend play. Affordance theory would also propose that natural materials and phenomena such as water, dirt, leaves, plants, sunlight and wind provide children with rich, varied, complex, and often soothing, sensory experiences." (p. 283).

So what is the educational value of a space such as this? It is multi-dimensional and guided by experts in science education and elementary student learning, hence the skill set and experience of the co-author (ALH). Outdoor education, environmental education, and sustainability education have the possibility of taking numerous forms. Across each unique context of this experience, the immediate immersion of students in the outdoor or environmental settings is recognized as essential and valuable from a variety of perspectives, both academic and experiential (Coe, 2016; Cottafava, Cavaglià, & Corazza, 2019; Payne & Wattchow, 2008; ).

'Ecological literacy' is a concept that addresses "...the competencies that encompass knowledge and beliefs and/or philosophies about the environment" ((Cutter-Mackenzie & Smith, 2003; Orr, 2004) cited by Fägerstam, 2012, p. 2)). This becomes an essential component in the development of students appreciation of and interaction with nature. Spaces such as these must be understood for their inherent value, partly because "...in light of an increased



pluralistic and political approach to environmental or sustainability education, there is the risk of neglecting nature encounters, which may limit children's opportunities to connect with nature. Aware of the lack of general causality between nature experiences and environmental concern, they argue for the potential of nature encounters" (p. 2).

Spaces such as these provide an opportunity for teachers to further integrate various curricula across the school setting. "Research indicates that when the environment is used to integrate a schools curriculum, achievement is higher (Lieberman, 1999). Teachers have begun to conduct lessons that integrate life science concepts with physical science concepts. Using an inquiry- based science approach, teachers pose driving questions, such as: "How do the physical factors of a habitat influence the organisms that live there?" (Pfouts and Schultz, 2003, p. 58). Teachers from every academic area possess access to a rich resource.

The process of authenticating the learning that happens in the classroom, students can develop a relationship with nature in the real-world setting of the schoolyard with its landscapes, weeds in the cracks on the blacktop, and the sky above. It is our connections with the natural systems that allows us to care deeply for these systems. For students in our schools today to embrace the Earth, and understand its value and beauty, they need experiences that allow them to explore, discover, question, and build a close connection to nature. "The solution to this situation is for the student to make connections and interact with the community in which he or she lives. Therefore, the realization of the aim of education to bring individuals to life will be possible by the participation of students in real life, making observations and investigations, being in different places and interacting with the society they live in" (Görkem and Gümüş, 2020, p. 173). "Students' knowledge about the environment and their experiences with nature near their homes correlated with their connection to nature and indirectly influenced their interest in environmentally friendly practices. According to this study, there seems to be a relationship between nature experiences, connections to nature and environmental concerns. One explanation could be that the access to nature develops a connection to nature" (Fägerstam, 2012, p. 3).

"It is thought that an understanding of teaching, in which the student takes an active role in the learning process, learns by doing, living, firsthand and the knowledge learned is permanent, is the most effective method in education. One of the approaches in which this understanding comes to life is the "outdoor education" method which argues that knowledge must be learned through first-hand observation and experience outside the classroom in order to enrich, enliven and complete the curriculum" (Görkem and Gümüş, 2020, p. 173). Outdoor learning experiences are often remembered for a lifetime. Integrating indoor learning and outdoor experiences, whether through play in the schoolyard or off-site field trips, allows students to take the next level of ownership of that knowledge. "Green schoolyards and other natural areas such as forests, parks, woodlands, and gardens afford a meaningful context for childhood education, as they provide children with numerous opportunities for both informal and formal learning experiences" (van Dijk-Wesselius, van den Berg, Maas, & Hovinga, 2020, p. 2). Furthermore, it provides hands-on, minds-on opportunities for students to apply and generalize the broader context of the world. Teachers and students can leave the constraints of the traditional classroom environment, students with a head full of new ideas and tools for observation enriches the learning experiences. Possibly the most important advantage of incorporating the outdoors into the traditional indoor learning environment is that it offers opportunities for students to build upon personal experiences and synthesize the content by applying what their new learning to a new environment.

Planning time for the outdoors during the school day is beneficial for student learning. Students who are engaged in hands-on, minds-on learning experiences in an outdoor environment often demonstrate enthusiasm, exhibit motivation for learning and, typically, academically outperform their peers who do not have these learning opportunities. "Green schoolyards can also be used as an "outdoor classroom" for teaching regular classes in subjects such as reading, writing, mathematics, sciences, art, drama, and environmental education. In this more formal approach to outdoor learning, learning comes alive through kinesthetic, sensory, and experiential learning style" (van Dijk-Wesselius, et al, p. 2). Children's attention span increases for longer periods of time outdoors on the same task and are more focused when they return to their indoor class work. "In addition, outdoor learning can reduce behavioral and concentration problems, particularly among children with difficult or mixed temperaments and children that are uninspired in the traditional classroom. Other demonstrated advantages of outdoor learning included improved academic achievement, observational capability, and reasoning skills, enhanced self-esteem, independence and feelings of interpersonal skills, cooperation and social cohesion, and multidisciplinary learning across subjects" (van Dijk-Wesselius, et al, p. 2). "Outdoor learning in natural areas can be an enrichment for

children, enabling them to learn beyond the borders of their classroom, and has potential to directly and indirectly strengthen primary schools' educational practices" (van Dijk-Wesseliuss, et al, p. 2).

### **13. Conclusion: The Unfolding Epilogue**

Following the successful planning, campaigning, and installation of the orchard, winter came and the plants went to sleep. With every visit to the orchard site, different residents can be seen enjoying the walkways and looking at the trees. One of the teachers involved in the installation still brings her class out at the beginning of each month and works on seasonal maintenance needed at the time. We are continuously expanding the orchard and the partnerships that sustain it. We still believe in asking questions and listening. This will help guide the development of this site, so that it meets the immediate needs of the local community. A recurring phrase across all aspects of this project has been "We wouldn't be here without you." We embrace this statement as a given fact and look forward to continuously doing so. For more information, the reader can review the project website at [www.maryscottcommunityorchard.org](http://www.maryscottcommunityorchard.org).

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