

The Positive Impact of Education for Sustainability

As the education community works to develop and enhance the three most important noncognitive skills—conscientiousness, concern for others, and perseverance—using a sustainability lens through which to view the curriculum can be an effective means for developing these skills, as well as other critical, high-level thinking and problem-solving skills. This white paper provides information about the benefits of using the sustainability lens through which to view the curriculum and associated pedagogy.

Developing Grit

Education for sustainability (EfS) employs approaches that are learner-centered, problem-based, and focused on real-world contexts and that attend to the broad ideas of interconnectedness, future orientation, and whole systems thinking, which align with effective teaching and the Next Generation Science Standards. The implementation of the education for sustainability paradigm results in quality student learning and engagement; additionally, EfS helps learners develop values, habits of mind, and character strengths associated with perseverance and a passion for long-term goals, a quality that Angela Duckworth and other educational psychologists are calling “grit” (Duckworth, Peterson, Matthews, & Kelly, 2007). When students are solving a real-life problem such as how to increase the recycling rate in the school or how to help provide nutritious food to people living in low-income neighborhoods, then students are more likely to stay engaged, be persistent, and be grittier.

Every Friday is Forest Friday for kindergarten students in Vermont’s Ottauquechee Public Schools. Students are individually responsible for preparing for whatever they might encounter—snow, rain, heat, or wind—before they leave the classroom. Once they are in the forest, students reflect on what is different from the previous week, check the day’s precipitation and temperature, and then begin the day’s activities. Students are eager to refer to nonfiction sources to help them better understand the elements and creatures of their forest.

School principal Amos Kornfeld, a catalyst for the Forest kindergarten program, frequently joins the students in the outdoor classroom. “They have become comfortable outside, have been able to take responsibility, and have been able to demonstrate lots of creativity and innovation,” Kornfeld (in Hopeman & Sobel, 2014) shares; “I’ve seen all sorts of foundational skills develop like cooperating, taking turns, counting, sorting, reflection, and things that they clearly could be doing in the classroom as well; but now they’re having to develop a certain amount of resilience, especially if it is cold or wet.”

Improving Achievement

EfS offers a compelling framework within which to learn. It increases student engagement and is a catalyst for both academic achievement (Center for Comprehensive School Reform and Improvement, 2007) and dropout prevention (Bridgeland, Dilulio, & Morison, 2006). Studies have shown that students who learn in the context of EfS are more motivated, better behaved, and more engaged in classroom activities (Barratt Hacking, Scott, & Lee, 2010).

Located near the West Virginia border, the community of Oakland, Maryland, looks like the stereotype of a hard-luck Appalachian community with abandoned rail lines and buildings with

collapsed roofs and peeling paint. It is not the type of community where you would expect to find the top elementary school in the state of Maryland, where 100 percent of the students pass the Maryland School Assessment, and 87% are on free or reduced lunch. Ten years ago, Crellin Elementary School adopted a place-based education paradigm that reaches far beyond the narrow scope of just improving test scores. Crellin's teachers offer students purposeful activity, social membership, and opportunities to develop competence. Students identified an environmental hazard on the grounds of the school and, through the search for solutions, created an Environmental Education Laboratory that is supported by multiple community organizations (Sobel, 2012). Using a place-based education paradigm, children are engaged in rigorous curriculum based on real environmental and community challenges.

A 5-year longitudinal study of 77 demographically paired schools was conducted in the state of Washington. One school in each pair was systemically integrating environmental education across the curriculum, and the other school in the pair was not. Researcher Bartosh (2003) found in 73 of the 77 pairs, students in schools that integrated environmental education (EE) programs consistently have higher test scores on the state standardized tests. Among other positive findings, students of schools with an EE curriculum also stayed in school longer.

Starting in the Beginning

As the central entity responsible for new teacher preparation and ongoing professional development for teachers already in the field, teacher education institutions play a vital role in the development of sustainability literate citizens. In pockets of innovation around the country, teacher educators have begun to address education for sustainability in the preservice and advanced professional development of teachers. Today, viable strategies and models for integrating education for sustainability into the professional development of teachers exist and provide clear evidence of viability of a transformed teacher education system that addresses sustainability. To realize the benefits of education for sustainability nationwide, EfS must be embedded into the process of learning to become a teacher; and individuals at all levels of the teacher education enterprise must become engaged with education for sustainability (Nolet & Snodgrass, 2014).

The promise of EfS goes well beyond mastering specific content areas and disciplinary approaches, and employing the essential lens of social, economic, and environmental interconnections for understanding and acting upon our global challenges and opportunities. EfS encompasses the passionate dedication to nurturing lifelong learning and serving the common good as members of a community, a country, and the world.

References

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- The recently released *National Action Plan for Educating for Sustainability*, published by Houghton Mifflin Harcourt and the Center for Green Schools, provides an excellent overview of education for sustainability in the U.S. education context. Available at <http://centerforgreenschools.org/nationalactionplan.aspx>