

# THE BENEFITS OF PLACE-BASED STEWARDSHIP EDUCATION



**T**he Great Lakes Stewardship Initiative (GLSI) is one of the largest efforts in North America to establish and support place-based stewardship education (PBSE) in K–12 schools and communities. It was launched in 2007 by the Great Lakes Fishery Trust, which committed more than \$10 million over ten years (2007–2017) to support the GLSI’s work.

The GLSI’s goal is to develop knowledgeable, active stewards of the Great Lakes and their ecosystems. To accomplish this goal, regional hubs across Michigan enact three strategies in their service areas: place-based education, sustained professional development for teachers, and school-community partnerships.

This paper focuses on the benefits of place-based stewardship education, one of three key strategies of the GLSI. It also addresses the contextual factors that may support or constrain the use of PBSE or the depth with which it is implemented. In compiling this review, we examined the published literature, and reflected on the experience of the GLSI to date.

This paper is one part of a larger effort that produced a set of case studies of exemplary PBSE (intentionally distributed across urban, rural, suburban, and small-town contexts), and a set of guiding principles for PBSE and an associated user guide and self-assessment rubric. These resources are available at [greatstewards.glstewardship.org](http://greatstewards.glstewardship.org).

## The Benefits of Place-based Stewardship Education

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Place-based education<sup>1</sup> (PBE) is a teaching and learning practice and philosophy that relies on place—including lands and waters, people and organizations, history, and culture—as a starting point for teaching and learning. In compiling this review of its benefits, we examined published literature and considered the Great Lakes Stewardship Initiative's experience in fielding place-based *stewardship* education in schools and communities across Michigan.

Although the benefits of PBE can be categorized in various ways, we think of them as 1) individual benefits (i.e., ones that accrue primarily to students, teachers, and other individuals); 2) institutional benefits (i.e., ones that pertain primarily to schools, districts, and community-based organizations); and 3) area benefits (i.e., ones that apply to the natural and built environments and the communities in which PBE occurs).

## STUDENT BENEFITS

Because PBE is first an educational endeavor, benefits for students are the most frequently researched, and collectively constitute the most extensive list of its established or hypothesized benefits. Here, we recognize two main categories of student benefits—academic benefits and positive youth development benefits.

**Academic benefits** that have been attributed to PBE include:

- Improved academic scores, including standardized test scores (Lieberman and Hoody 1998, SEER 2000, Bartosh 2003, Glenn 2000), and performance improvements in subject areas addressed by PBE, including science, social studies and civics, math, and writing (Lieberman and Hoody 1998, Howley et al. 2011, Coleman 2011)
- Improved critical thinking skills and disposition toward critical thinking—when projects are multidisciplinary, open-ended and inquiry-based; empowering of students in regard to their own learning; and include reflection (Athman and Monroe 2004b)
- Increased engagement in school and motivation for achievement (Athman and Monroe 2004a, Powers 2004, Duffin et al. 2004, Falco 2004)
- Increased workplace skills such as leadership, persistence, taking responsibility, teamwork, developing plans to reach a solution, managing time, motivating others, and dealing with unexpected challenges (AIR 2005, Glenn 2001)
- Deeper learning and action competence (Barratt and Barratt Hacking 2011)—when PBE consists of active, participatory, and collaborative learning approaches that support action-taking in the community and motivates students to move beyond “surface” learning

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<sup>1</sup> Here, we review published research on place-based education, environment-based education, and other close cousins that feature multidisciplinary, experiential learning and meaningful service to the local community. The Great Lakes Stewardship Initiative is focused on place-based *stewardship* education, which can be described as place-based education with a focus on environmental stewardship.

- Increased awareness of career options; research in the closely related service-learning field has demonstrated links between participation in service-learning and knowledge of career possibilities (Billig 2000)

For PBSE—for example, as practiced by the GLSI—academic gains consistent with the list above might be framed as increased performance in environmental inquiries (whether in science, social studies, or other core subjects); increased awareness of career paths related to the environment; increased engagement and deeper learning in environmentally focused studies; and increased critical thinking, action competence, and workplace skills acquired through PBSE experiences in the community.

In addition to academic benefits, substantial research links place-based education with outcomes explored in the literature on **positive youth development**. These include:

- Social-emotional development, which includes increases in self-esteem, sense of empowerment and agency, social interaction and social skills, social capital, and awareness of cultural diversity (Billig 2000, Robinson and Zajicek 2005, Shusler et al. 2009, Schusler and Krasny 2010).<sup>2</sup>
- A sense of place and community attachment. Withrow-Clark, Konrad, and Siddall (2015) describe a sense of place as a composite of place attachment and place meaning. Harrison (2011) describes PBE as “one way of bringing places to life,” and asserts that this increased consciousness of place helps us “work toward the well being of people and environments” (p. 94). Other aspects of sense of place include enculturation to place, appreciation of place, and a sense of being anchored to place (Barratt and Barratt Hacking 2011).<sup>3</sup>
- Civic-democratic competencies and attributes. PBE is viewed as resulting in increased civic engagement, involvement, and responsibility (Schusler et al. 2009, Duffin et al. 2004, Volk and Cheak 2003, Gallay et al. submitted, Flanagan and Gallay 2014). Aspects of this can include increased advocacy and activism around local issues; motivation to protect the commons; an increase in one’s “critical consciousness” related to issues (Chin et al. 2015); development of skills and conduct of action research; caring; attention to community issues; and an increased participation in community activities. In this category, Mogensen and Schanck (2010) also include “action competence,” or the “ability, motivation and desire to play an active role in finding democratic solutions to problems and issues connected to sustainable development” (p. 62).<sup>4</sup>

In place-based *stewardship* education, these positive youth development benefits translate as pro-environmental attitudes and action competence on environmental issues. Environmental sensitivity is a potential outcome of PBSE without correlates in the literature on positive youth development, insofar as that literature focuses on human communities, whereas environmental studies and action challenge us to also consider nonhuman communities. Barratt and Barratt Hacking (2011) describe this as an increase in understanding of the “relationships between people, fauna, flora, and places” (p. 8). Contact with nature has also been connected in the literature to children’s physical and

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<sup>2</sup> In the positive youth development literature, these outcomes correspond to items in the Search Institute’s positive identity, positive values, and social competency assets (Search Institute 1997/2006) and the 4-H Health/Being and Heart/Caring life skills (Hendricks 1998).

<sup>3</sup> In the positive youth development literature, these concepts are most evident in the “connections” component of the 5Cs model (Pittman et al. 2003).

<sup>4</sup> In the positive youth development literature, civic-democratic competencies and attributes correspond to the 4-H Hands/Giving Life Skills.

mental health and well-being (Frumkin 2001; Faber Taylor and Kuo 2006; Louv 2005; Chawla and Flanders Cushing 2007).

## TEACHER BENEFITS

Place-based education provides a variety of potential benefits for teachers, including:

- Opportunity to pursue their interests and advance their values. Ernst (2007) found that “environmental literacy knowledge and skills” and environmental sensitivity were consistently higher among teachers who chose and used environment-based education<sup>5</sup> as opposed to more traditional in-class methods for environmental education.
- Development of their skills. Educators using PBE can teach in ways that invigorate their practice, involve new instructional approaches, and integrate different disciplines. Barratt and Barratt Hacking (2011) state that “...PBE affords researchers and practitioners the opportunity to develop innovative and eclectic approaches by transcending disciplinary and methodological boundaries.” Teachers using PBE also collaborate more and develop leadership skills (Powers 2004).
- Increase in student interest and enjoyment of learning. Teachers engaged in environment-based education and PBE consistently report that students are motivated by it (Bartosh 2003, Plumb 2003). This positive outcome for students is refreshing and energizing for teachers.

## SCHOOL AND DISTRICT BENEFITS

Realized and potential benefits to schools and districts using place-based education include:

- Increased levels of teacher engagement and satisfaction (Place-based Education Evaluation Collaborative 2010, Plumb 2003).
- An integrated option to reach numerous and robust standards and curricular priorities, as well as youth development priorities (Chin 2001).
- Increased awareness by the community of the conditions, needs, and efforts of the schools (Plumb 2003).
- Stronger connections with community-based partner organizations (e.g., nonprofit organizations, businesses, and governmental agencies), as well as parents and other community members who may volunteer their time in support of PBE (Plumb 2003, Powers 2004).
- Access to grants, funders, and recognition.

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<sup>5</sup>“Environment-based education” is closely allied to place-based education and community-based education, and is the pedagogy referenced by Julie Ernst in her 2007 publication, as well as her other publications referenced in this document. In Glenn (2001), environment-based education is defined as follows: “While environmental education focuses on building a base of environmental knowledge and skill to be applied to environmental stewardship, environment-based education uses a popular subject matter to improve students’ learning skills and create a wider learning context for students, teachers, and the community. Environment-based education emphasizes interdisciplinary integration of subject matter, problem- and issue-based learning experiences, team teaching, learner-centered instruction, constructivist approaches, and self-directed learning. A similar term, ‘environment as an integrating context’ (EIC) is used by the State Education and Environment Roundtable (SEER) to describe this approach ([www.seer.org](http://www.seer.org)).”

- Curricular complementarity. Several instructional practices, curriculum emphases, and pedagogies—particularly those pedagogies that emphasize experiential learning—can be combined in complimentary ways. Some of the pedagogical and curricular emphases, terms, and resources that may be meaningful for participating schools and districts include:
  - Academic service learning
  - STEM
  - STEAM
  - Project-based learning
  - Problem-based learning
  - Action competence
  - Intergenerational learning
  - Inquiry-based learning
  - Critical pedagogy
  - Cooperative learning
  - Student-directed learning
  - Civic ecology
  - Environment-based education

## COMMUNITY PARTNER ORGANIZATION BENEFITS

The published literature on benefits to community partners involved in place-based education is relatively scant. Our list reflects some of the potential benefits noted by Jon Yoder (Northwest Center for Sustainable Resources 2004) for place-based education efforts in which community partnerships are prominent. It also reflects the GLSI hubs' experiences since 2007 in cultivating and sustaining school-community partnerships as a key element of place-based stewardship education across Michigan.

Realized and potential benefits to partner organizations supporting and engaging in place-based education include:

- Options to engage and inform students, teachers, and others involved in PBE in the work of the partner organization, and to raise awareness of the organization's mission, activities, and employment opportunities
- An expanded capacity to address certain issues and opportunities through collaboration that exceeds the partner organization's capacity when it works alone
- Networking opportunities with other organizations in the same field or industry
- Access to grants, funders, and recognition

## COMMUNITY BENEFITS

Realized and potential community benefits from place-based education include:

- Empowering communities to “preserve the heritage of their local place while adapting to change” and to take “ownership of their future” (Barratt and Barratt Hacking 2011, p. 9; see also Rural School and Community Trust 2013, p. 3)
- Bringing the community together in productive activities that potentially lead to increased social connectedness; intergenerational learning; social capital; and community capacity (Krasny et al. 2010)
- Increasing participants’ engagement in policy process, advocacy, and activism (Tidball and Krasny 2010)
- Increasing the community’s sense of place and capacity for placemaking<sup>6</sup>
- More numerous, impactful, and sustainable partnerships with schools
- Revitalizing and improving the community (Heness 2001)

Community improvements have been particularly well documented as benefits of PBE in rural communities and small towns (Andresen, Dallapiazza, and Calvert 2013; Brennan and Barnett 2009; Ivan 2010). In these same types of communities, PBE has been further suggested as a method to retain population (Smith 2004; Theobald 1997; Petrin, Schafft, and Meece 2014), and possibly prevent school closures (Howley et al. 2011). In the GLSI, we see the community enhancement benefits of PBE accruing in all types of communities.

In place-based *stewardship* education, benefits to the community that are directly related to the environment come to the forefront. These include:

- Improvements to the local ecosystem; restoration of environmental assets and sensitive areas
- Increased community awareness, knowledge, attention, and action related to environmental issues
- Increased environmental stewardship values and behaviors
- Increased recreational use of the environment
- Increased understanding of cities as “ecologically valuable places” (p. 20) and enhanced awareness of nature in urban contexts (Russ and Krasny 2015)

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<sup>6</sup> Placemaking refers to a collaborative process by which we can shape our public realm to maximize shared value. More than just promoting better urban design, Placemaking facilitates creative patterns of use, paying particular attention to the physical, cultural, and social identities that define a place and support its ongoing evolution. (Project for Public Spaces 2016).

# CONTEXTUAL SUPPORTS AND CONSTRAINTS FOR PLACE-BASED EDUCATION

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Various conditions in a community can serve as either opportunities or constraints—factors that expand or limit engagement with place-based education, or influence its nature or outcome. In the case of place-based *stewardship* education, these conditions—identified or discussed by various authors or echoed in the experiences of the GLSI's regional hubs across Michigan—include:

- Access to nature/natural areas and cultural perceptions of “the environment”—what it includes and where to find it (Krasny, Kudryavtsev, and Stedman 2012)
- Degree of interest in and support for environmental protection in the community
- Issues related to involving students in off-campus fieldwork, most notably safety concerns (Ernst 2012) and available budgets for transportation (Ernst 2009)
- Access to diverse, willing, and able community-based organizations with which schools may partner
- Building and district-level factors within schools, including administrative support (Ernst 2012), staffing stability, the degree to which teaching is governed by adopted scope-and-sequence documents, access to common planning time, and level of stress related to testing and standards (Powers 2004)

In sum, there are many suggested and observed benefits of PBE, and most (if not all) extend to the practice of PBSE. However, one would not expect the specific benefits of this practice and philosophy to accrue in the same degree or combination in every locality and in every instance. This reflects what an effort's designers choose to emphasize: an effort rich in STEM practices but short on a meaningful student role in planning and management may yield significant gains in ecological understanding and science process skills, but little to no student social-emotional development. Similarly, an effort led by a single high-school teacher may offer sharp gains in the content area that is the teacher's chief assignment, but forgoes the opportunity to address numerous, cross-disciplinary standards in a single, integrated, problem-solving effort.

Variations in benefits are also associated with contextual supports and constraints. Benefits will accrue more slowly, or be weaker, when administrative support is absent, teacher turnover is frequent, or scope-and-sequence documents leave no room for flexible pacing, as these forces constrain teachers attempting to bring PBSE to their teaching. Conversely, in communities with a strong culture of environmental protection; nearby, accessible natural resources; willing and prepared community partners; and support from educational administration, benefits can be broad, far ranging, and relatively quick to emerge.



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