

Improving EE in Teacher Education: A Statewide Effort in Wisconsin

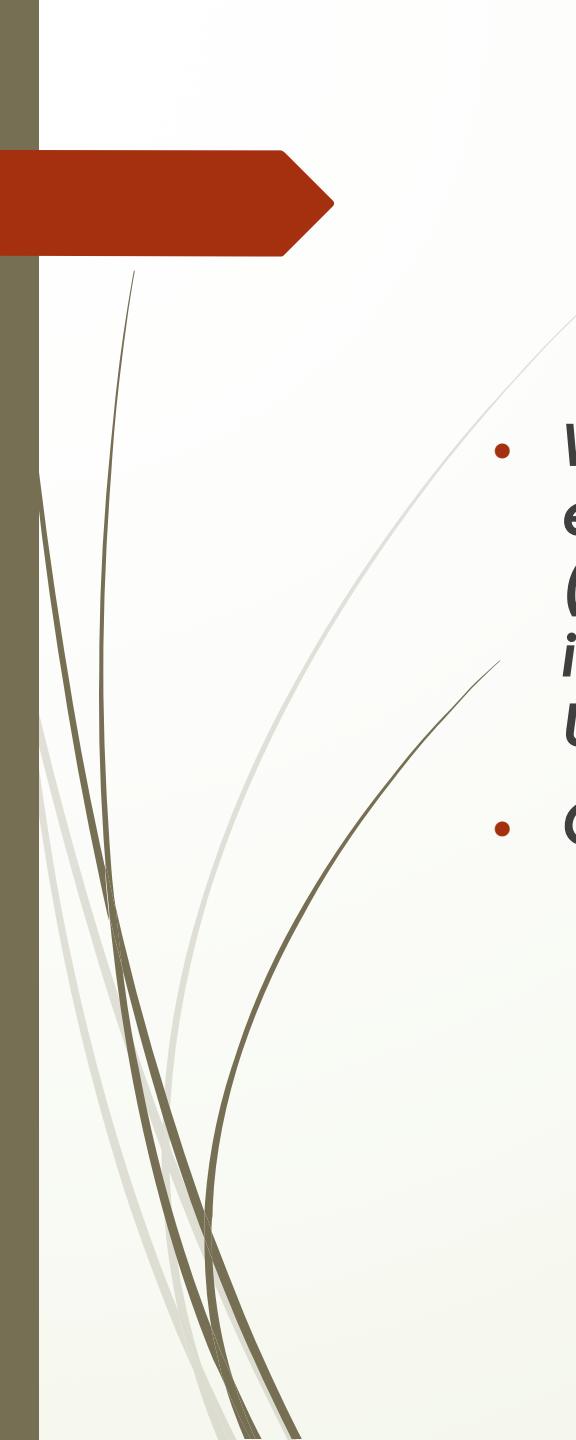
Rebecca L. Franzen, Scott Ashmann and Michael E. Beeth

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Why Did We Do This Work? *Environmental Education in Wisconsin*

- *Wisconsin has a long-standing tradition of respect for, and education about, our shared natural resources. Increase Lapham (1811-1875), initiated this tradition while working as a civil engineer in 1836, three days before Wisconsin was officially recognized as a U.S. Territory.*
- *Others who have been influential environmental educators include*
 - *Aldo Leopold, author of A Sand County Almanac*
 - *John Muir, who grew up in Wisconsin and founded the Sierra Club in 1892*
 - *Gaylord Nelson, a U.S. senator and governor from Wisconsin, founded Earth Day in 1970*



Statutory Requirement

- *The Wisconsin state legislature approved the need for conservation education for youth in 1930.*
- *The requirement that all school districts in Wisconsin integrate environmental education into their curricula was established in 1983.*
- *The following state statute was adopted in 2000 for inclusion in teacher preparation:*
 - *Environmental education including the conservation of natural resources for K-12 teaching licenses in agriculture, early childhood, elementary education, secondary science and secondary social studies. [Wisconsin Administrative Code PI 34.15(4)(b)].*

Our Study

**Ashmann, S. & Franzen, R.L. (2015): In what ways are teacher candidates being prepared to teach about the environment? A case study from Wisconsin, *Environmental Education Research*,
DOI: 10.1080/13504622.2015.1101750**

If you would like a copy, please e-mail ashmanns@uwgb.edu and I will send you a pdf attachment.



How did we designed and deliver our workshops?

- ***Funding from NSF - workshop/conference proposal, \$134K***
- ***True workshop format - participants worked on developing curriculum for ½ of all time together - appreciated the time to focus on EE***
- ***Focused on place-based learning - Invited Speaker: David Sobel, Antioch University***
- ***3 days, 2 days (2 days) - food, lodging, travel, stipend, instructional materials...and snacks!***
- ***49 participants from 19 IHE's - invited all 33 TE programs to send 2 faculty involved in teacher preparation***





Participant Comments

Personal commitments to learning about the environment...

I believe environmental education is important because there is more to learning than [can be done just inside] the walls of a classroom. Kerry

For me, environmental education really connects all these other disciplines together. I'm mainly a Biology/Chemistry person, but with environmental education I can make links between Earth Science, I can link it with Physics. I can cover something in environmental education and it's relevant to all of the [traditional science disciplines]. Ralph





Participant Comments

The impacts on and value of teaching about environmental education for preservice teachers...

Wonder, discovery, exploration...these are all things we want our K-12 students to be able to do. The way to model that for preservice teachers is to have them explore and discover and do. I think [environmental education] is a perfect fit. Kerry

I don't have to have this transformative experience for my students far, far, away [from campus], it can be right in the backyard, and so if I can teach my preservice teachers how to do that I think that is going to engage their future students in environmental education, but it also engages the teachers in getting excited about just asking questions while being in a [local] place. Seth



Participant Comments

The value of social networks that were formed during the workshops...

I think talking with individuals and bouncing ideas off of them and having chats with them or just simply sitting down and saying 'what are you doing and what do you remember?', I think that was the most valuable part of the experience, the sharing of ideas especially [at the workshop] in Madison. But this last January's workshop was unbelievable, hearing what people were doing and actually a few of their ideas helped influence [the graduate class I am designing]. The most powerful thing that I learned was through the conversation that I had, was that we all needed to be there. Seth

I think the biggest thing is being able to connect with others. We actually get to sit here and talk face to face. I think that's what makes this more important than just a video conference, we then learn more about each other, we then explain our struggles to each other, and I think I've found common concerns with the people I've talked with... So, I think that's the other strength of coming to this is, you make connections that are way deeper and can be used right away than if it's [a workshop presented] on a website. Ralph

What were our outcomes and findings?

June 2017 Workshop - 49 participants

January 2018 Workshop- 34 participants

**Curriculum developed – electronic
and paper book**

Environmental Education
Activities for Teacher
Educators: A Sampling from
Wisconsin



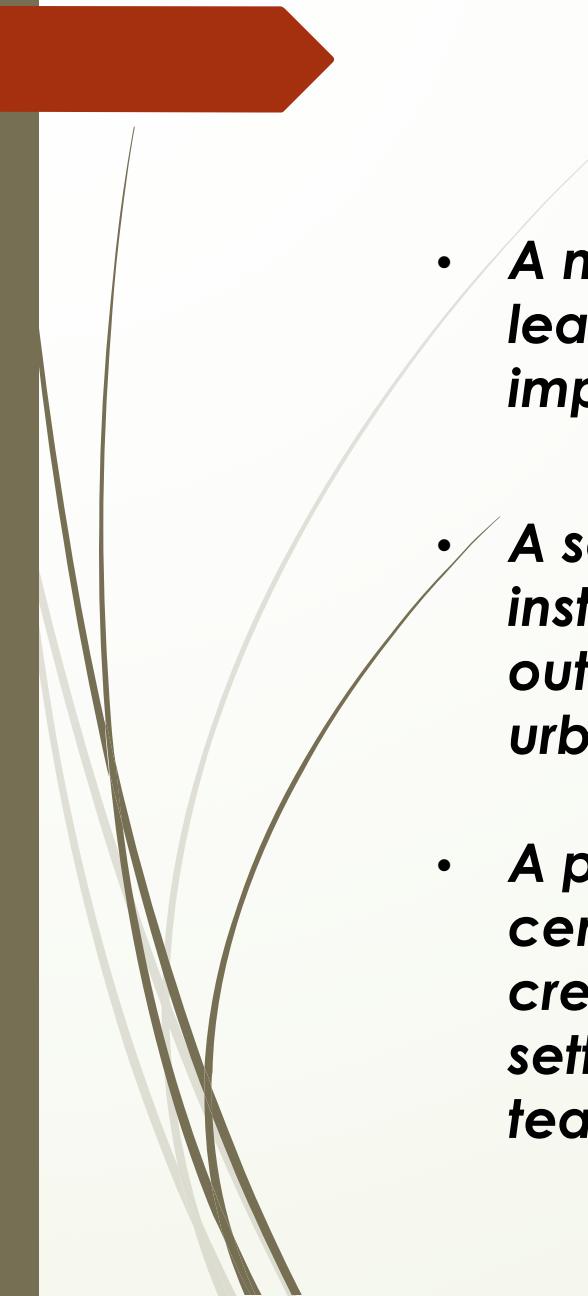
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L. Franzen, Scott
Ashmann, Michael E.
Beeth, Clayton T. Russell,
Victoria Rydberg, and
Amy Schiebel

Grade level/subject area alignment

Title	Outside experience	Math Methods	Science Methods	Social Studies Methods	Literacy Methods	Multidisciplinary Methods	Early Childhood EC/MC
Outdoor education review report	x		x			x	x
Introducing Place-based Education in Social Studies				x			
Trees as Storytellers	x		x	x			x
Time Well Spent: a facilitated solo experience to ignite environmental literacy.	x					x	x

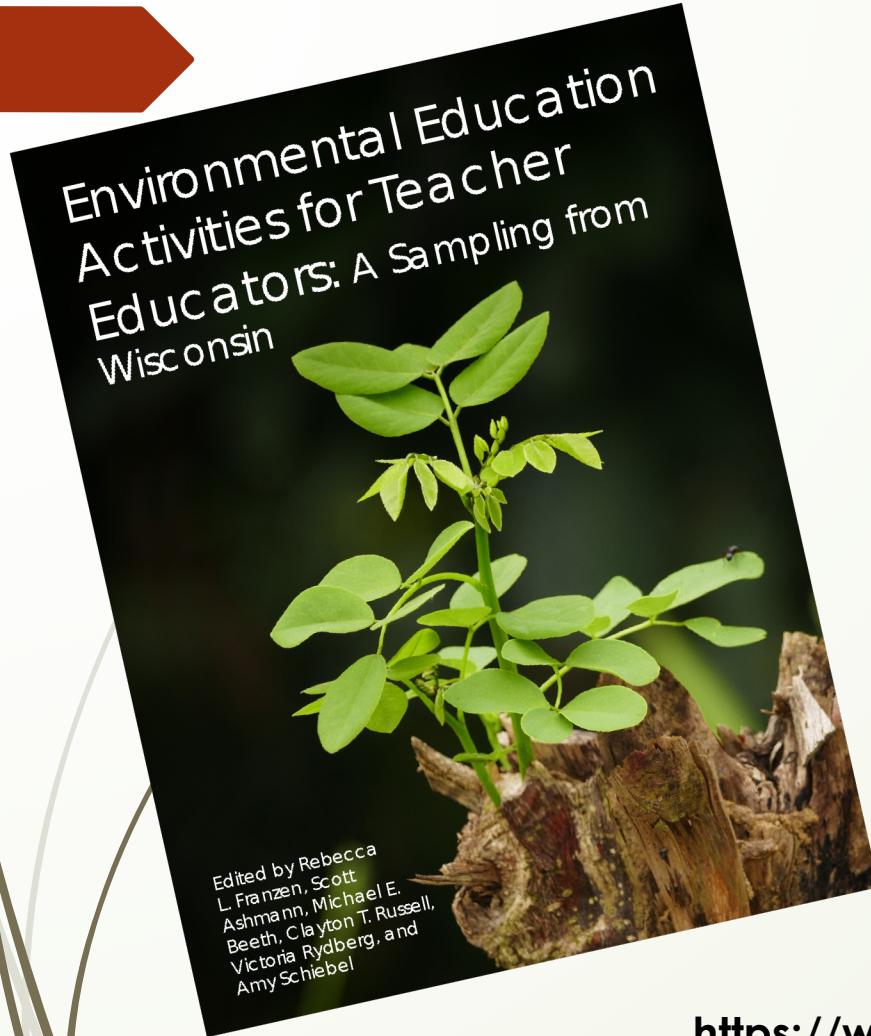
NAAEE Guidelines alignment

	Theme 1: Environmental literacy				Theme 2: Foundations of EE			Theme 3: Professional Responsibilities of the Environmental Educator		
	1.1	1.2	1.3	1.4	2.1	2.2	2.3	3.1	3.2	3.2
Outdoor education review report										
Introducing Place-based Education in Social Studies										X
Trees as Storytellers	X	X								
Time Well Spent: a facilitated solo experience to ignite environmental literacy.	X	X		X						



Case studies

- A *math and science methods instructor integrated place-based learning into undergraduate and graduate level courses, implementing lessons he had time to design during the workshop.*
- A *social studies methods instructor partnered with another institution that attended the workshop to deliver a multi-day outdoor education experience for middle school students from an urban environment.*
- A *pre-school teacher educator partnered with a local nature center so her undergraduates students learned to integrate the creative arts through environmental education in an outdoor setting, something she hadn't considered in her 30 years of teaching prior to the workshop.*

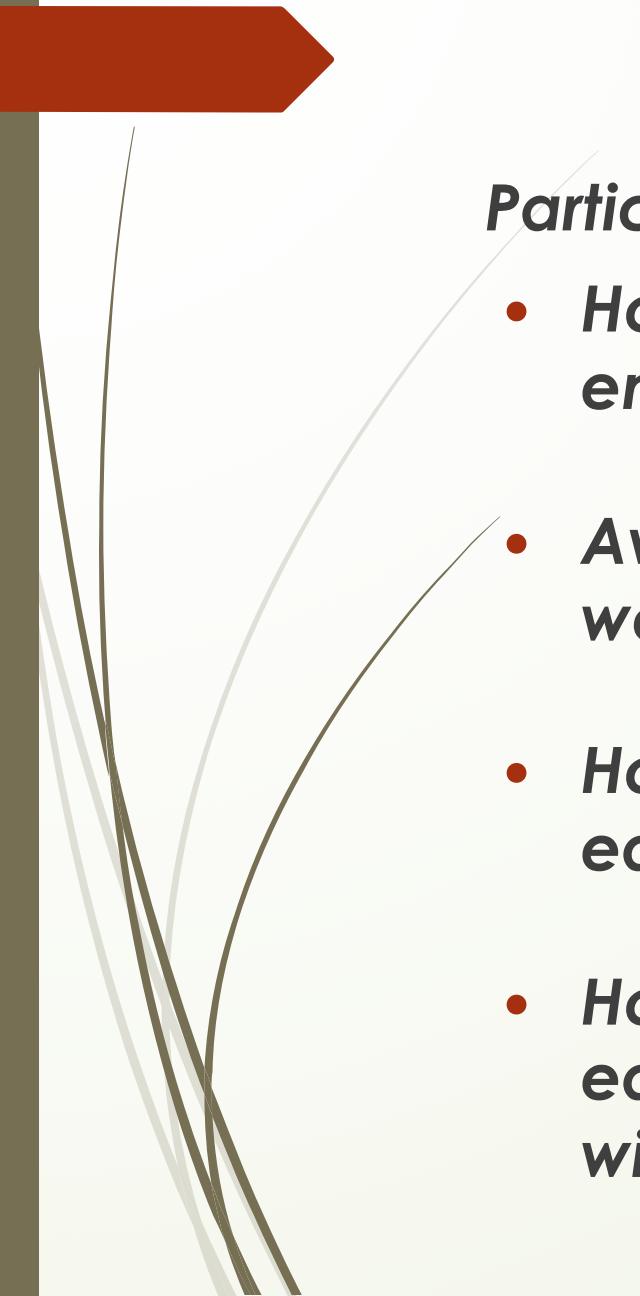


Impacts on material, human and social resources:

- **published instructional activities**
- **for individuals**
- **for participants during the workshops**
- **between institutions of higher education**
- **in establishing social networks**
- **potentially for preservice teachers and the K-12 students they teach**

<https://www.uwsp.edu/cnr-ap/wcee/Pages/publications.aspx>

<https://naaee.org/eepro/resources/environmental-education-activities>



Related outcomes

Participants:

- Hosted a *Zoom meeting about integrating environmental education in a chemistry classroom*
- Awarded a grant to host *Project WILD* and *Aquatic WILD* workshop
- Hosted a guest speaker specific to environmental education in their undergrad course
- Hosted a guest speaker specific to environmental education for a professional development workshop with colleagues



Findings

- **Boosted personal commitments for workshop participants**
- **Demonstrated impacts and documented the value of incorporating environmental education into preservice teacher preparation**
- **Importance of social networks to improving our collective efforts to deliver high quality learning in environmental education**

Conclusions and recommendations

Professional development for IHE faculty influences practice.

Courses

Programs

Potentially student learning

Professional development workshops build social resources/capital.

Collaboration

Networking

Development of a common vision

Agreement on the definitions of terms



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Environmental Education Activities for Teacher Educators: A Sampling from Wisconsin



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