



ICEEC

IOWA CONSERVATION
EDUCATION COALITION

**ENVIRONMENTAL
/ CONSERVATION
EDUCATION IN
IOWA**

ABSTRACT

The Iowa Conservation Education Coalition conducted a survey and follow-up series of interviews with formal and nonformal educators to determine the current status of conservation/environmental education in Iowa. Included here are the findings from that work and recommendations going forward. Report completed January 2020.

exec@iowaee.org

Executive Summary

Integration of EE/CE in Schools

EE/CE can be valuable to formal education, but almost 4/10 teacher respondents rarely or never include environmental education in their teaching even though 72% of teacher respondents teach science. Respondents suggest that EE is integrated “somewhat” in multiple disciplines in schools and two-thirds of teachers use the outdoors for learning fewer than 5 days a year. Comments suggest that access to nearby sites and time are barriers. Concerns also exist among a plurality of respondents that EE/CE “seeks to indoctrinate” and that it is an “add-on” to core curriculum.

Even so, classroom visits were the most frequently used type of programming by naturalists and other nonformal educators and formal educators overwhelmingly agree that EE:

- weaves real world experiences and environmental issues into student learning.
- provides meaningful, authentic, and applied learning experiences.
- is related to my discipline / subject area.
- is an important component of scientific literacy.
- provides opportunities for authentic 3-D learning.
- is valuable to a holistic STEM program.

Motivations for supporting and/or engaging with EE/CE

Teacher respondents were most influenced by “makes learning relevant to students,” followed by “my commitment to the environment,” and “student concerns about or interest in the environment.” Administrators indicated student engagement (“makes learning relevant...,” “student concerns...,” and “makes learning fun...”) were strong motivators. “My belief in interdisciplinary education” was also a strong motivator for Administrators and AEA Consultants. A significant portion of curriculum coordinators selected “Useful experiences from courses/workshops I have taken” as well. Overall, administrators were *not* motivated because EE is mandated.

Comfort with and use of CE/EE topics and practices

A significant proportion of teachers indicated they were not comfortable teaching some EE/CE topics. Administrators and curriculum directors indicated they are not as knowledgeable in EE/CE practice or topics. Nonformal educators are well-versed in most content areas, but have less training in educational practice.

Supporting EE/CE through resources, training, and tools

When asked about educational strategies, about half of formal education respondents indicated need for more resources/training for skills in the following: developing and using models; conducting field investigations; project/place-based learning; constructing explanations or designing solutions; exploring phenomena; and obtaining, evaluating, and communicating information.

Among potential barriers to integrating EE into their teaching, “access to resources” was cited by about half of teacher respondents. Potential resources or services to address barriers that ranked high among teachers, administrators, and naturalists include:

- EE curriculum materials aligned with Iowa Core for my grade/subject area
- Resources/support to develop and use an outdoor learning area at my school/site
- Tips/ideas for using EE resources in specific grade/subject area
- Additional professional development/training in EE topics
- A network of teachers working on EE and sharing resources
- Inclusion of EE courses/topics in STEM certification programs
- Webinars/online training or tutorials for EE

Programming/services by nonformal educators:

There are a host of outreach and education efforts related to conservation and the environment. Respondents provide a variety of program types through several venues. Classroom visits were the most frequent. Park/nature area and facility-based programs were also frequently used as were general public programs. The least frequent were service learning, citizen science, after school, and library programs.

Besides programming, nonformal conservation/environmental educators provide several other resources. Most common are websites (73%), newsletters (67%), lessons/activity guides and displays (60% each). About 20 % also mentioned social media, especially Facebook.

Interviews revealed that many local entities (CCBs) are increasing their CE/EE efforts as are several organizations, but state and federal agencies' outreach and education budgets and staffing have decreased significantly in the past decade. Many organizations have a content area focus, and the curricula/resources they recommend reflect that; many interviewees cited content resources (materials, experts). Educational resources cited included lesson plans/curricula, training/workshops, and a variety of methods for sharing/networking.

When asked about a broader CE/EE network or activities across disciplines, a majority of interviewees indicated they would benefit from

- Professional development
- Conferences
- List serves
- CE/EE workshop or networking event
- Webinar or on-line content
- Idea sharing, examples of great CE/EE process or case studies

Recommendations for ICEC (and partners) going forward

Formal Education

- Recognize core formal education areas where conservation/environmental education has the strongest alignment (prioritize) and provide unbiased, quality resources, and professional development that address Iowa Core standards using *best educational practices*. (e.g., Iowa Core for Science – and connections to other Core standards; STEM initiatives)
 - in person/web-based
 - included in STEM certification
 - begin with conservation basics
 - work with AEAs to integrate approaches and formats consistent with current suggested practices
- Provide support to increase integration of EE/CE and connection with outdoors.
 - Continue monthly tips/ideas for using EE resources in specific grade/subject area.
 - Work with partners to enhance communication channels and approaches.
 - Determine existing channels and how to access
 - Provide content that is useful to educators
 - Provide timely content
 - Work with state and local partners to provide resources/support for outdoor learning areas on or near school sites.

Nonformal

- In conjunction with IAN, determine needs and provide basic resources and professional development on pedagogy (general education methods, science and engineering practice) and child development as it relates to education as well as emerging conservation/environmental topics such as soil health.
- In conjunction with partners, determine most expedient approach to sharing examples of great EE/CE process and case studies across content topics. (website, listserv, workshop/event)

Capacity Building

- ICEC is in a unique position to provide a common platform between and among nonformal partners working with formal education, especially in terms of facilitating collaboration on development, promotion, and support of broad-based, quality conservation/environmental education curricula and resources. With the array of resources and providers, ICEC's most important role may be to communicate the value of EE/CE to formal education partners and connect them with quality resources and training.