



Environmental Education: Inventory of Current Practices Executive Summary & Key Findings

This is a summary of the major findings of the Environmental Education: Inventory of Current Practices survey that was developed in Fall 2017 and administered to Rhode Island teachers and administrators in Spring 2018 by the Rhode Island Environmental Education Association (RIEEA). The purpose of the survey was to gain an accurate understanding of the current state of environmental education (Environmental Education) in Rhode Island schools and to assess what educators need to successfully implement Environmental Education practices.

Attitudes about Environmental Education

Teacher and administrator respondents professed similar attitudes about Environmental Education and the Environment. They agreed that Environmental Education should be considered a K-12 priority, it is important for teachers to integrate environmental issues into their teaching, and that districts should develop/implement Environmental Education curriculum. Teacher and administrator respondents tended to agree that Environmental Education provides meaningful learning experiences, enhances learning and supports other subjects, and integrates real world experiences into student learning. While teachers were more likely than administrators to agree that environmental literacy is an important component of scientific literacy, administrators indicated greater awareness of the positive academic and social impacts of Environmental Education on students and teachers. Both groups also disagreed that Environmental Education is successfully taught only by science teachers or appropriate mainly for science/social studies, is an “add on,” and takes time away from mandatory subjects. The number of years of teaching experience has no relationship at all with teachers’ beliefs about, level of commitment to, knowledge of, preparation to engage in, motivation to engage in, or perception of barriers to engage in Environmental Education. However, as teachers’ positive beliefs in Environmental Education increase, so does their commitment to and their knowledge of the impacts of Environmental Education. And as teachers’ negative beliefs about Environmental Education decrease, their positive beliefs about and commitment to Environmental Education increase.

Preservice and Professional Development

Survey findings revealed that the vast majority of teachers and administrators in the survey sample had not been exposed to Environmental Education at all during their teacher or administrator preparation, either as a standalone course or infused into methods or content courses. Likewise, a majority of teachers and of administrators had not participated in professional development in Environmental Education during the last 3 years. However, it was revealed that early childhood/elementary teachers had statistically significant more professional development in Environmental Education than their middle and high school counterparts and administrators had participated in more Environmental Education-related training than teachers.

Classroom Instruction

Teachers indicated that “infusion” (blending environmental concepts into existing lessons when the opportunity arises) was the most common way in which they incorporated Environmental Education into their instruction followed by teaching one or more Environmental Education units during the school year and intentionally designing lessons to incorporate Environmental Education concepts, whereas the Environmental Education teaching strategy most advocated by administrators was inviting guest speakers to present on Environmental Education issues, followed by infusion, and “integration” (intentionally designing lessons to incorporate environmental concepts). Further, 5-10% of administrator respondents indicated uncertainty about the best approach to integrate Environmental Education. When asked to provide examples of how they integrated Environmental Education into their school day, the most common method described by teachers was through class discussion (71%), followed by hands-on activities (45%), projects (40%), and going outside on school grounds (39%). Few teachers reported using service learning or partnering with environmental organizations to engage in Environmental Education. Administrators responded similarly, but with field trips and service learning also ranking high on the list of how they perceived that Environmental Education was being

integrated at their schools. Interestingly, administrators were also more likely than teachers to indicate that classroom instruction in their schools included environmental topics or took place in the natural world.

Barriers to Engaging in Environmental Education

The principle barrier identified by teachers and administrators alike was that it was difficult to fit Environmental Education into a curriculum that was already very crowded. In fact, the main barriers perceived by both groups had to do with the fact that Environmental Education was not included or occupied a position outside other, standard educational resources or supports, including curriculum, teacher preparation, teaching resources, teaching knowledge and background, and state/district accountability systems. Further, it was found that middle school teachers reported statistically significant higher levels of barriers to engaging in Environmental Education than did high school teachers, as well as statistically significantly more negative beliefs about Environmental Education than their early childhood/elementary education counterparts. At all grade levels, teachers who feel more prepared to implement/engage students in Environmental Education practices aligned with the Next Generation Science Standards perceive fewer barriers to engaging in Environmental Education than those who feel less prepared. Additionally, as teachers feel more prepared to implement/engage students in Environmental Education practices aligned with the Next Generation Science Standards, their perceptions of motivators to engaging in Environmental Education increase (and vice versa). Lastly, fewer teachers are aware of available Environmental Education resources and curricular and think they are helpful than do administrators.

Assessment of Environmental Literacy

Teachers reported using informal assessment methods (i.e., classroom discussions and teacher observation) more than any other assessment methods. Further, one quarter of teacher respondents indicated that they assessed students through project-based activities and one-quarter reported that they did not assess their students' environmental knowledge/skills at all. While teacher and administrator survey respondents felt equally prepared to carry out their respective responsibilities related to the Environmental Education-aligned Next Generation Science standards (NGSS), more than half of teacher and administrator respondents rated themselves as only somewhat or not at all prepared to teach or support teachers in the following NGSS-aligned student practices: students demonstrate their understanding of the ways that technology impacts the environment; students demonstrate their understanding of ecological systems; students design a solution for reducing the impacts of human activities on the environment.

Supports Needed

Teachers ranked professional development as most helpful for including more Environmental Education in their teaching, followed by materials and resources. Funding and administrative support were ranked least helpful. Supports that would be most helpful to administrators in supporting teachers include (in order of most to least helpful): funding, professional development, materials, resources, and administrative support. "Other" types of support that teachers mentioned included: more time, a more flexible curriculum, increased community connections, collaboration with colleagues, and facilities. Administrators mentioned model classrooms to visit, time to collaborate, and ready-made Environmental Education resources as "other" types of helpful support.

Recommendations

Based on the findings and conclusions presented in the Environmental Education: Inventory of Current Practices Summary of Findings, the following recommendations are offered:

- Provide teachers and/or administrators with: increased connections to the environmental community; more frequent opportunities to collaborate with colleagues and communicate with administrators; opportunities to visit "model" Environmental Education classrooms; access to "ready-made" Environmental Education resources; and increased funds for transportation (i.e., buses), field trips, and guest speakers.
- Expand opportunities for professional development in Environmental Education for ALL teachers, but particularly at the middle and high school level, as well as for administrators.
- Advocate (at the district/state level) for a more flexible curriculum in which to implement Environmental Education.