



ECOLOGICAL EDUCATION: TEACHING FOR SUSTAINABILITY AND THE WHOLE CHILD

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ABSTRACT

It has been recognized, by researchers, that humankind is confronting an ecological environmental crisis; therefore, ecological education is indispensable. To protect our ecological system, to make the right choices, and to protect future generations of humans and other living species we not only need economic, technological, and administrative measures but to provide ecological, environmental knowledge to students. Education for the 21st century should include an approach that promotes wholeness and educates for a sustainable society and social justice. Children have a right to learn how about ecological education, teaching for sustainability, developing eco-literacy, creating learning communities, and forging an education that will help them construct their future and maintain a healthy planet.

Keywords: ecological education, holistic education, teaching for sustainability, teaching, learning communities, children's rights, environmental education

SINOPSIS

Varios investigadores/as han reconocido que la humanidad enfrenta una crisis ecológica ambiental por lo tanto, la educación ecológica es imprescindible en las escuelas. Para proteger nuestro sistema ecológico, tomar las decisiones correctas y proteger futuras generaciones tanto humana como otras especies, necesitamos no tan sólo medidas económicas, tecnológicas, y administrativas pero proveerles a los estudiantes con el conocimiento ecológico. El enfoque de la educación del siglo 21 debería promover la educación holística, una sociedad auto sostenible y la justicia social. Los niños/as tienen el derecho de aprender sobre ecología, enseñanza auto sostenible, desarrollar vocabulario ecológico (eco-literacy), y crear comunidades de aprendizaje para forjar una educación que los ayude a construir su futuro y mantener un planeta saludable.

Palabras clave: educación ecológica, educación holística, enseñanza auto sostenible, enseñanza, comunidades de aprendizaje, derechos de los/as niños/as, educación ambiental

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The greatest gift we can give our children is to assist them in their dreams of a planet of pure air, water, sunlight, and soil, where the community of all living beings can flourish in the celebration of existence.

-Thomas Berry

The Convention on the Rights of the Child by the United Nations postulates rights that must be achieved for children to develop their full potential. To develop the whole child, cognitively, physically, spiritually, ethically, and within his and her environment free from hunger, neglect, and abuse it is essential to create educational conditions to assist children, their caretakers, and community. Education for the 21st century should include an approach that promotes wholeness and educates for a sustainable society and social justice; hence, ecological education comes to the forefront. The existence of human beings as well as other life-forms depends on individuals developing the knowledge and awareness, and educating for sustainability (Dunlap, Van Liere, Mertig, & Jones, 2000). This article briefly discusses the benefits of ecological education in teaching sustainability, developing eco-literacy, creating learning communities, and forging an education that will help children construct their future and maintain a healthy planet. After all, without a planet, safe water and other necessary conditions there will be no future for our children.

The United Nations and their initiatives with the *Decade for Education for Sustainable Development* (2005-2014) states that more research is fundamental to develop alternative teaching and learning processes that will increase students' environmental awareness, produce effective action, and social justice. Society needs to take actions to provide new directions and develop another course of action in educational institutions. John Dewey stated in *The School and Society* that students should submerge in their local environment and "experience its



geographical aspect, its artistic and its literary, its scientific and its historical sides. All studies arise from aspects of one earth and the one life lived upon it” (1990, p.31). The area of sustainable development needs new competences and capacity building; thus, it is imperative children be educated considering the ecological issues from a local and global perspective. For example, decisions made in England or China or the United States affect indirectly and directly Brazil, Caribbean nations, and Thailand. The deforestation of one country to make furniture for another has devastating consequences. Furthermore, children need to learn that ecological problems go beyond national boundaries and call for new ways of collaboration, partnerships, and ways of learning (Martin & Jucker, 2005).

What Some Children Have to Say About Environmental Issues

American high schoolers worry about the effects of environmental problems. Many students are concerned with the conditions they will face as adults. According to Spencer (2006), 30.8% of high school students worry about damage to the global environment; 55% of Americans think the natural environment will worsen in the next 10 years; 54% worry about water pollution and drinking water; 44% fear air pollution; 40% care for the loss of tropical rain forests, and 34% worry about global warming. Puerto Ricans also worry about the environment. *Caribbean Business* (2006) polled Puerto Ricans on their ecological preoccupations. According to their results, 80% of citizens stated they are highly concerned about the environment; 71.6% worry about water pollution; 66.0% are very concerned about air pollution; 47.8% are upset about the amount of trash; and 47% worry about illegal waste dumps; 42% of Puerto Ricans



worry for the lack of extensive recycling centers and programs, and 44.4% are concerned with noise pollution.

In an informal study, Colón-Vilá asked children, in the state of Florida, between the ages of 7 and 12 what they thought about environmental issues. Rosanne, a 12 year old, stated: “Grown-ups make the messes and destroy the planet and we have to clean it up”. Seven-year-old Billy shared, “Will there be any animals left when I am a dad?” Another 7 years old, Isabelle, affirmed, “What will the world be without animals? Ugly!” Many children commented on how they felt it was unfair they would not inherit a clean planet. Rebecca stated, “It is unfair that so many poor children drink dirty water, sleep on the floor, and cannot eat candy sometimes” Victoria added “It is unfair adults make all the decisions and don’t even ask our opinion.” Other children focused on the lack of environmental activities in their school. John, “I wish my school had a garden. I love seeing flowers grow.” Tommy added, “Why don’t we recycle in school?” and Andrea contended, “We can’t do much of anything without help from our parents, family, or teachers.” This last comment stresses the importance of building community partnerships. As the African proverb says, it takes a village to raise a child.

What is Ecological Education?

Ecological education within a holistic framework focuses on empowering, transforming, and developing consciousness among students. Ecology, social justice, and authentic forms of educational assessment are included in holistic education. Children are part of their ecosystem and have a right to learn how to work with, not destroy, their surrounding ecosystem in order to connect, respect, nurture, and develop a connection to other living organisms. Vital factors which



for children's and all people's survival. Students' natural surroundings, communities, and the planet are integral domains of their lives. Individuals are part of a natural system that directly and indirectly affect each other. Schools are microsystems of a larger system; unfortunately, they have become alienated from those larger systems, such as their surrounding communities and the natural environment surrounding the schools (Flake, 1998).

Ecological education is not only about global warming, acid rain, biodiversity, and the disappearance of forests, but includes, economics, population, risk analysis, public policy, social justice, earth as a living system, and developing in students not only awareness but an understanding of ecological issues. Ecological education within a holistic approach has the power to construct positive connections between school and society. Furthermore, ecological education promotes sustainable development consistent with teaching the whole child (Miller, 2003; Orr, 2003, 2004; Dewey, 1990) and educates for sustainability from an interconnected pattern. Eco-literacy has the ability to raise awareness for the need to protect the environment, health, and living systems (Gallegos-Nava, 2001). Living systems which include plants and animals, but also human beings. Ecological education also develops relations between students and nature and promotes an understanding on how individual and collective decisions influence the environment and ecosystems.

Ecology develops students' relation to other organisms, to one another, and helps them make the correct choices regarding the planet (Blewitt, 2005; Orr, 2004). Many schooling structures are a "fragmented map and landscape" (Carter, 2006, p.2) which focus on bits and pieces of the students' learning process and do not take into consideration the students' community, natural environment, and family. Ecological education presents an opportunity to



consider sustainability through other academic subjects, integrated curriculum, cross-curriculum, or multidisciplinary curriculum. Topics such as citizenship, eco-literacy, social justice, the greening of the curriculum and school, and developing sustainable partnerships within the community (Blewitt, 2005). Moreover, children have a right to foster positive relations among family, society, and workplace within the context of a shared planet (Flake, 1998) ecological education can help children and their families to develop such relationships.

Systems Thinking and Ecological Education

Although schools are not living systems in themselves, individuals who are part of the living system form them. In social systems, the existence of the group(s) is to benefit its member. For example, the school benefits students (educate), teachers (have a profession), and community at large benefits once students learn their trades. Studying ecological systems allows individuals to see how the systems protect its members and try to maintain stability; therefore, using ecosystems as a metaphor for ecological education is appropriate (Capra, 2002 & 2005). All sub-systems, economic, political, social, and cultural influence the natural environment and how people relate to and make choices concerning the natural resources; therefore, instead of looking at the environment as a separate system ecological education takes a holistic approach and studies the different variables and their relation to each system (Padilla & Luna, 2005; Gallegos-Nava, 2001; Simon, 2006). Systems' thinking allows educational leaders to understand better the interconnectedness between the school, students, educators, and the environment.

In addition, ecological problems are systemic in nature and need to be explored in their full dimensions by exploring the social implications, the effects on health, and ways to decrease



these ailments (Capra, 2002). Children have a right to learn ways to reduce and address the problems that they eventually will confront. Teaching ecological education by using learning communities has the potential to strengthen local communities. Learning communities are a group of people (students, teachers, parents, and community members) that share a vision. It is people “committed to thinking, growing, and inquiring and where learning is an attitude as well as an activity, a way of life as well as a process” (Sergiovanni, 2000, p. 59). In systems, thinking decision-making is shared and one of the goals of a learning community is to create transformation. Several characteristics shared by learning communities are, they have a supportive and shared leadership, collective creativity, shared values and vision, supportive conditions, and a shared personal practice (Miller, 2000 and Laszlo, 2000). Shared decision-making is a factor in curriculum reform and in the transformation of teaching roles in schools.

Learning communities have been an option in many rural, poor, underserved areas. Many learning communities provide intergenerational classes, parenting classes, technical classes in conjunction with regular classes for younger students. Some of them have been connected to the basic jobs of the area, for example, organic farming, fishing, or pottery making. Parents and students learn together on science, botany, and economics. Learning communities as part of an ecological educational program helps create self-learners and directed-learners. We are all connected in some way and somehow. Together schools create communities and communities form partnerships with schools. Each member contributes to the community as well as to the learning process.



Conclusion

Our children have a right to play, breathe, laugh, and love in a healthy planet. Our children and youth have a right to live and learn in a safe environment. Our children have a right to grow up learning about sustainability so they can shape their future accordingly. Many scholars have argued the importance of educating the whole child. Nonetheless, ecological education (also known as, eco-education, environmental education, and eco-literacy) has not been included as an essential component in developing the whole child. Moreover, ecological education is holistic and creates learning communities to help build bridges between community, work, sustainability, and teaching the whole child. Creating an environmentally friendly school and providing ecological education is an important step towards sustainability and social justice (Bing-Kwan & Stimpson, 2003). Human health cannot be protected if natural resources such as water, soil, and air stay unhealthy; thus, educational leaders must guide future leaders in a new holistic-ecological direction. Furthermore, ecological education connects students with nature and “offers an environment where [students] can easily contemplate infinity and eternity” (Louv, 2005, p.97).

“What our world needs...is...flexible and functional learning environments where people, young and old, can be exposed to concepts and ideas relevant to their present and to their future” (Ervin Laszlo, 2000, p. 137,). To solve problems we are going to need to rethink and restructure new systems. We need new thinking and new ethics to produce new systems. Are you up to the challenge?



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