

Re-engaging Youth through Environmental-based Education for Sustainable Development

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To live up to UNESCO's definition of a sustainable development education that empowers youth with the knowledge, attitudes, motivations, commitments, and skills to solve and prevent the world's *total* environmental problems, youth must be able to find meaning in the curriculum based in their own experiences and expanded through shared group experiences. An environmental-based experiential curriculum with a positive development focus can help youth reclaim their learning process and reconnect with their communities. However, without critical analysis, students, especially marginalized students, cannot develop the tools and competencies to truly understand their environment and their place within it. Linking environmental and experiential education with critical theory provides students the opportunity to develop their leadership and gain the social and cultural literacy skills needed to come in from the margins.

Keywords: sustainable development education; environment; experiential; social constructivism; critical pedagogy of place.

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I begin this article by discussing my central assumption: that the current public school system is struggling to keep students, especially marginalized students, engaged in their schooling. There are well documented socially negative outcomes of youth alienation (Greene, 1978; Higgs, 1995; Ryan & Deci as cited in McCombs, 2001; Sinclair & Ghory, 1987) but it is a positive youth development approach (rather than a prevention focus) that promises to empower alienated students (Catalano, et al., 2002). I outline the ways an environmental-based experiential curriculum with a positive development focus can help youth reclaim their learning process and reconnect with their communities.

Such a curriculum requires a different way of viewing learning and knowledge, and I briefly explore cognitive and multiple learning style theories that shape a social constructivist approach. I then demonstrate how such an approach can be implemented in an environmental-based experiential curriculum, using the Environment as an Integrating Context (EIC) Model™ as an example (SEER, 2005).

Although the EIC model is an excellent beginning, it does not offer the critical perspectives and skills necessary for alienated students to engage in and change their situations. I thus expand the EIC model to include David Gruenewald's (2003) concept of a critical pedagogy of place, linking environmental and experiential education with critical theory. Thus integrated, these theories fit within the United Nation's framework of Education for Sustainable Development (ESD) (UNESCO, 2005, 2004).

Challenges of Alienation, Possibilities for Reconnection

Few will argue that the public school system in the United States faces a myriad of challenges to effectively engage and educate an increasingly diverse student population. Following the publication of *A Nation at Risk* in 1983 and the ensuing fear of a loss of international economic competitiveness, the federal government embarked upon major educational reform. Successive administrations emphasized high academic standards, increased student achievement, and an alignment of curricula. The *No Child Left Behind Act* passed in 2002 (USDE, 2006) continued the reform, adding stronger punitive measures against teachers, administrators, and students if they fail to meet federal and state minimum test scores (loss of funding, loss of position, etc.) (McCombs, 2001). Many educational researchers believe such "high-stakes" testing models are counter-productive to effective learning (e.g. Berliner & Biddle, 1995; Bracey, 2003; Goodlad, 1983; McCombs, 2001). Some argue the current educational system actually alienates students from their schools and from the learning process (Ryan & Deci as cited in McCombs, 2001; Greene, 1978; Higgs, 1995). To put it more simply:

Students are alienated from the classroom where they are told that the content and the product are more important than they are, where the test scores are what matter, and where the value of students is measured by standards to which they cannot relate. (Higgs, 1995, p. 9)

This environment means all students run the risk of at least temporary disconnection from their school and learning (Sinclair & Ghory, 1987). Is it right to lay all of the blame on the student

when they disconnect? Critical theorists argue alienation and disconnection are inevitable results for students who are not part of the dominant culture. Maxine Greene (1978) claims “thousands upon thousands of young people...have been selected out of the system...rendered invisible...dehumanized and made mute” by the very curricula meant to educate them (pp. 66-67). As one high school student put it in Patricia Hersch's (1998) six-year study of adolescents, “I spend all my time trying to make up for the losses I get in school. It tears your soul to pieces” (p. 223). Hersch suggests that adolescents are trapped in a “tribe apart;” isolated in a world largely unknown to adults. She believes the growing number of adolescents who are alienated and disengaged from the community get caught in an escalating spiral of dangerous situations. McCombs (2001) links youth alienation to increased suicide rates, alcohol and drug abuse, school disciplinary problems, dropout rates, and delinquent behaviors.

Socioeconomically marginalized students are more likely to be alienated and must overcome particularly daunting personal and academic obstacles to succeed in the current system (Higgs, 1995; Sinclair & Gory, 1987). For students growing up in poverty, there is a distinct connection between feeling powerless and an increased risk of engaging in dysfunctional behaviors. Youth may feel little control over their economic situation, their schools, or their lives, but they often have easy access to negative forms of power such as dealing drugs or using weapons (Teen Empowerment, 2006). Particularly if poverty is persistent, the likelihood of low-income students dropping out of high school and never attending college increases (Lyter, 2002; Duncan, Yeung, Brooks-Gunn, & Smith, 1998).

Poverty can affect children and adolescents on multiple levels. Greg Duncan and his colleagues (1998) found family income had its highest correlation with children's ability and achieving measures. Poverty also has been linked to low self-concept and its associated problems (Baum & Payea, 2004; Duncan et al., 1998; Higgs, 1995; McCombs & Whisler, 1989; Mcleod, 1996; Oman et al., 2004). According to the Institute for Women's Policy Research, poverty compromises both children's physical growth and cognitive development and reduces one's physical and psychological wellbeing as an adult (Lyter, 2002). While current research emphasizes the need to address issues of poverty at an early age to avoid the most significant impacts on a child's cognitive ability and achievement levels (Duncan et al., 1998), the question remains as to what we can do to better support and educate low-income adolescents and young adults before they feel so isolated and alienated that they drop out of the school system. More than that, what educational strategies and curricula may empower low-income and at-risk youth to become agents for their own learning, as well as social change agents in their own communities? As Hersch (1998) discovered, “even in a world that has disappointed and scared and hurt them, [teens] still want to connect” (p. x).

A sense of connection and meaning is key to student engagement in the learning process. Emotion is the gatekeeper to learning (McGeehan, 2001). If students feel oppressed or disassociated from their learning process, there are neurological ramifications. The brain stores most effectively what is meaningful from the learner's perspective (McGeehan, 2001). Higgs (1995) suggests learning approaches that strengthen academic self-efficacy, improve self-concept, and help students move toward a more internal locus of control provide a better platform for individuals to make lasting changes in their beliefs about learning. High-risk youth in particular need learning environments where they have opportunities to form positive

relationships with adults, to master skills, and to contribute to their own and their community's wellbeing (National Academy of Sciences as cited in Kaplan, 1999). Kaplan argues that we need to develop support services that help teens feel safe and feel like they belong, give them a sense of independence while being supervised, and provide education as well as physical activities (Kaplan, 1999).

Shifting Focus: Positive Youth Development

What these researchers suggest is a more holistic way of working with youth. Rather than focusing on preventing a “problem behavior,” a youth development program should embrace and nurture the innate qualities and skills of each young person. By the 1990s, many prevention practitioners and prevention scientists agreed upon this point. They conceded that, “a successful transition to adulthood requires more than avoiding drugs, violence, or precocious sexual activity. The promotion of children’s social, emotional, behavioral, and cognitive development... [is] ...key to preventing problem behaviors themselves” (W.T. Grant Consortium on the School-Based Promotion of Social Competence, 1992 as cited in Catalano, 2002, p. 5). Such an approach became known among a number of educators as Positive Youth Development (PYD).

The PYD approach emphasizes the importance of supporting youth to build their positive qualities within a program that recognizes the social context of their lives (Gillham et al., 2002). Lopez and McKnight (2002) expand the definition to an “ongoing process in which all youth are engaged and invested. Youth interact with their environment and positive agents...to meet their basic needs and cultivate assets... [which they]...use to build additional psychological resources that facilitate growth” (p. 2). It is the physical and psychological competencies youth develop that best serve to facilitate their transition into adulthood.

Thus far, I have argued that a PYD approach has the potential to create the meaningful and supportive environments researchers suggest are key for at-risk youth to overcome the obstacles limiting their growth and learning. While PYD is not limited to any one field or type of program, I next introduce what I term Environmental-based Experiential Education as an especially powerful context for its application.

Connecting Through Environmental-based Experiential Education

Environmental education can offer a context for alienated youth, particularly low-income youth, to find positive and meaningful ways to re-engage in their communities and in their learning process. Richard Louv (2005) points to studies that link the divide between the young and the natural world with mental, physical, and spiritual health problems – what he terms “nature deficit.” The research suggests that the way a curriculum treats students' relationships with the natural world has environmental, social, psychological, and spiritual implications. “How the young respond to nature, and how they raise their own children, will shape the configurations and conditions of our cities, homes – our daily lives” (Louv, 2005, p. 3). Environmental education naturally provides the contextual learning, relationship and knowledge building, collaborative learning, and individual attention the aforementioned researchers identify as key to

supporting low-income students' engagement and success. There is a growing body of research linking environmental education to improved academic performance, as well as improved critical thinking and problem-solving abilities (e.g. Desmond et al., 2004; Dirks et al., 2005; Lieberman & Hoody, 1998; Sheffield, 1992; Subramaniam, 2002; and Volk & Cheak, 2003).

Environmental and experiential education naturally meld through social constructivism (Arnett, 2004; Cowan, 1978; Dewey, 1938, 1915, 1902; Elkind, 1981; Gardner, 1983; Gauvain, 2001; Keating et al. as cited in Arnett, 2004; Palincsar, 1998; Piaget, 1973, 1954; and Vygotsky, 1978) and positive youth development (Catalano & Hawkins, 1996, 2002; Pittman & Fleming, 1991 as cited in Lopez & McNight, 2002) into what I loosely term environmental-based experiential education (AEE, 2006; Fenwick, 2001). The approach creates the space for students to engage in community environmental issues in ways that are both meaningful for them and for their individual cognitive development, learning styles, and intelligences (Arnett, 2004; Gardner, 2006, 2004, 1999, 1983; Kolb 1987). Kolb likens the process to Paulo Freire's (1968) *conscientizacao*, the deepening of awareness that occurs when people merge reflection and action to transform their realities.

Social Constructivism in Action: The Environment as an Integrating Context

Environmental service and project-based learning activities offer a natural context for a social constructivist approach (Couto, 1994; Fleming, 2000; Hubbert, 2002; and Liu, 2003). The west coast-based State Education and Environment Roundtable (SEER, 2005) has developed one such framework it terms "using the Environment as an Integrating Context for learning" (EIC). The EIC basic concepts include (SEER, 2005; Lieberman & Hoody, 1998):

- ◆ Experiential, hands-on learning, often through community-based problem-solving and project-based activities;
- ◆ Integrated-interdisciplinary instruction;
- ◆ Collaborative instruction, and cooperative and independent learning;
- ◆ Learner-centered, constructivist approaches adapted to individual students and their unique skills and abilities (see Dittmer et al., 1993 for details of approach criteria); and
- ◆ The development of knowledge, understanding, and appreciation for the environment-both the community and its natural surroundings.

According to one SEER report (2005), a number of schools across the nation have created environmental programs based on the EIC framework. Students learn through "hands-on methodologies that allow them to apply knowledge and skills to relevant, real-world learning opportunities in their local communities" (p. iv). While the number of schools that have embraced the EIC approach is relatively small, initial research suggests that students in EIC schools are outperforming their traditionally educated peers on standardized testing in reading, language, math, spelling, science, and social studies (SEER, 2005; Lieberman & Hoody, 1998).

The SEER core concepts are quite similar to the social constructivist environmental-based experiential model I have thus far outlined. It is important to note that the SEER organization was developed in a cooperative effort of sixteen state departments of education. As such, the EIC

concepts are considered best practices at state level. In fact, SEER is one of the lead organizations creating California's statewide environmental curriculum called for in the Education and the Environment Initiative (Assembly Bill 1548) (California EPA, 2013). Unfortunately, as the EIC approach is still young, I am unaware of any research evaluating larger issues of cognitive development or reduction of student alienation.

The concept underlying an EIC approach is relatively simple. Students learn better when they can work within a local, meaningful context. SEER is clear that the local environment can include both natural and social systems, thus opening rich and interdisciplinary opportunities for students to engage in their communities.

Praxis and the Total Environment: Education for Sustainable Development

It is important to mention that an environmental and experiential curriculum is not necessarily the “magic pill” for resolving the alienation many students feel toward school and learning. As successful as environmental programs can be at engaging students in meaningful learning, David Sobel (1996) suggests some types of environmental education exacerbate students' alienation. Sobel coined the term “ecophobia” to describe the disassociation students often experience when they are barraged with example after example of environmental abuses and impending catastrophes. Students may be gaining knowledge and awareness of the environment, yet because their lives and schools are so separated from the natural world, they begin to associate it primarily with fear and apocalypse. Leon Festinger defines this reaction as cognitive dissonance, a mental condition which sets in when “awareness and knowledge of problems engage personal values, creating a desire to act, *yet the student simultaneously lacks the knowledge, skills, experience, and/or opportunities to act*” [emphasis added] (Festinger, 1957). To cope with their feelings of dissonance, people respond with apathy, anger, alienation, denial, and depression, and by assigning responsibility for making changes to others.

I already have discussed why environmental-based experiential education should offer students of all academic levels relevant and accessible activities that promote interdisciplinary connections and can accommodate individual learning styles and needs. At the same time, in order to avoid potential cognitive dissonance, they need to facilitate students' ability to *act* based on their skills and knowledge. The United Nations has created an international definition of environmental education that emphasizes the importance of curricula that promote both knowledge and action. The United Nations Educational, Scientific, and Cultural Organization (UNESCO) 1976 Belgrade Charter and the follow-up 1978 Tbilisi Declaration (NAAEE, 2004) state:

Environmental education is a process aimed at developing a world population that is aware of and concerned about the total environment and its associated problems, and which has the knowledge, attitudes, motivations, commitments, *and skills to work individually and collectively toward solutions of current problems and the prevention of new ones* [emphasis added] (UNESCO, 1978).

The idea behind “total environment” is a key concept as it emphasizes that nature, humans,

social equity, economics, culture, and political structure are all inherent parts of the environment (NAAEE, 2004). UNESCO (2004) makes this explicit in its definition of education for sustainable development (ESD) which links the environment, society, and the economy as integrated key domains.

The UNESCO definition for ESD emphasizes the importance of building the skills and competencies necessary to solve total environmental problems. The document further states that it is increasingly clear “that many *social, economic, and environmental issues are connected*, such as poverty, unequal distribution of resources, population growth, migration, malnutrition, health and HIV/AIDS, climate change, energy supply, ecosystems, biological diversity, water, food security, and environmental toxins” (UNESCO, 2004, p. 8). To truly move toward sustainability, environmental education curricula should therefore include a critical reflection of sociocultural and economic factors influencing people's lives. The EIC approach is an important step toward integrating environmental education into the public school system, but it does not implicitly address the need for social change.

While educators may balk at the idea of becoming “political,” the purpose of linking critical pedagogy with experiential and environmental education is to develop the awareness and sophistication necessary to solve complex world problems. Without critical analysis, students, especially marginalized students, cannot develop the tools and competencies to truly understand their environment and their place within it. The United Nations has named 2005-2014 the “Decade of Education for Sustainable Development.” The UNESCO draft of ESD (2004) specifically states that “sustainable development is not about maintenance of the status quo, but rather the direction and implications of change...[and should include]...ending deprivation and powerlessness” in the world (pp. 12-13).

Maxine Greene (1988) offers a useful description of the need for critical perspectives: Poor children and others often experience the weight of what is called 'cultural reproduction,' although they cannot name it or resist it. By that is meant not only the reproduction of ways of knowing, believing, and valuing, but the maintenance of social patternings and stratifications as well. The young people may not chafe under the inequities being kept alive through schools, as inequities often are; they are likely to treat them as wholly, 'normal,' as predictable as natural laws. The same might be said about advantaged children who grow up with a sense of entitlement and privilege, but still feel they have no choice. (p. 124)

As part of their skill development, students need to learn to “read” their schools, workplaces, politicians, and media; they need to understand the world that shapes their perspectives (Christensen, 2000). Through this process, students learn to be responsive to principles of freedom, justice, and regard for others (Greene, 1978). When people can name their world, when they have the critical skills to understand and analyze their lives, they can commit themselves to working toward positive social change (Freire, 1968).

Including critical pedagogy in an environmental-based experiential curriculum thus offers students their first steps toward reclaiming the learning process. Within the social constructivist context of the program, students can take advantage of their learning community to build upon

each other's expanding perspectives, beginning the process of dialogue Freire speaks of. However, as Freire (1968) adamantly points out, dialogue is mere verbalism without action. The “focused reflection” mentioned in the Association for Experiential Education (2006) definition is an important beginning for a student's developing consciousness, but that reflection must be integrated with action. This notion of *praxis* is vital to personal and social transformation, and also is an important distinction between Dewey's vision and that of critical theorists. Many experiential education programs (and social constructivism generally) focus on Dewey's notion of reflection, which seeks to engage students in making connections and meaning through educative experiences. However, Breunig (2005), Couto (1994), and to some extent Kolb argue that experiential education should help create a more socially just world. Greene (1978) and Freire (1968) are clear that *praxis* involves critical reflection and action, often in concert with others, to *transform* a situation in order to overcome oppression or domination. While both approaches are important to a student's learning, critical pedagogy is how students can move beyond their cognitive dissonance to engage the environmental, economic, and social problems surrounding their lives.

A Critical Pedagogy of Place: Education for a Sustainable World

Ironically, critical pedagogy or environmental education alone can easily lead to cognitive dissonance as students confront overwhelming environmental problems and systemic injustices. Recognizing the danger, David Gruenewald (2003) attempts to integrate environmental and critical theories through what he terms “a critical pedagogy of place.” He believes the strength of environmental education is that it naturally engages people in their own social and ecological surroundings. In effect, place-based environmental education teaches us how to “reinhabit” our total environment instead of merely residing there. Gruenewald argues reinhabitation is a vital process that helps people develop the commitment and connection necessary to engage in action. As Sobel (1996) puts it, children need to learn to love the earth before they can be asked to save it. The EIC model is an excellent example of a place-based pedagogical approach. Activities and actions students engage in have direct relevance to their lives because they are occurring in their own local environment. Meaningful interdisciplinary learning is naturally applied through community-service projects, school gardens, or local restoration projects (SEER, 2005). Students build a more complex awareness of their environment, as well as a practical competence that they can build and draw upon for future actions. In effect, schools help shape the way the next generation *thinks and acts* toward the natural world (Orr, 2004, 1992).

However, Gruenewald argues that place-based pedagogies tend to ignore the power structures that shape our world. As I have discussed, it is important not only to engage in environmental projects, but also to critique and analyze our place within the total environment before we can make true social change. Gruenewald terms this process “decolonization,” the questioning and rejecting of the unjust dominant cultural patternings Greene referred to. At the same time, decolonization requires learning “more socially just and ecologically sustainable ways of being in the world” (Gruenewald, 2003, p. 9). Gruenewald considers decolonization the flipside of reinhabitation; one is not possible without the other.

As the decade of education for sustainable development comes to a close, there is more need

than ever for programs and curricula that offer an empowering opportunity for alienated youth to re-engage and transform their total environment. The theoretical explanation perhaps overly complicates the simple idea that meaningful shared learning and work create opportunities for young people to escape their isolation. Engaging in valued activity that is easily linked to interdisciplinary learning, community service, and personal and social change is a central component of an education for sustainable development.

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