

ENVIRONMENTAL EDUCATION AND ECO-PEDAGOGY

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Abstract

One of the new components of the education is the environmental education, a new education which is seen as an act of diversion by human society today, a more rational use of the natural resources for a smooth coordination of the scientific data's to establish more lasting bonds between science and education, so that human needs to be adequately satisfied without causing disruptions.

Always, from its first beginning, man was formed and developed along with nature. Along the road of its development, the man interrelated with the natural environment enjoying his generosity, but also intervened more or less consciously in its balance, the changes that influence and determine the environmental disasters and changing the Earth totally.

Key words: Environmental education, interdisciplinary education, respect, involvement.

Zusammenfassung

Die Frage nach dem Verhältnis des Mensch zur Natur ist eine der elementarsten Fragen des menschlichen Seins.

Niemand kennt heute einen wirklichen Ausweg aus den fundamentalen Umweltproblemen. Auf jeden Fall sollte man vor historische Sündenböcken, nach verpassten Alternativen und intakten Vorbildern in der Vergangenheit hüten. Ein wesentlicher Schritt in Richtung auf eine Erklärung des aktuellen Umweltproblems liegt dagegen in der Erkenntnis, wann und durch welche Prozesse genau die Schwelle überschritten ist, jenseits deren das gesamte System Umwelt-Mensch- Beziehung in Richtung auf einen Gleichgewichtspunkt zu kippen beginnt.

Wenn wir über das Verhältnis zur Natur in Beziehung zur Pädagogik setzen, dann, man muss sich erinnern was in der Pädagogik „Bildung“ heißt. Eco-Pädagogik ist nicht anders als nachdenken über den Umgang mit der Natur.

Schlüsselworte: Umwelterziehung, Respekt, Natur, Eco-Pädagogik

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Environmental education and Eco-pedagogy**Introduction**

Environment – as a subject of environmental education, includes not only the nature but also the society, culture, economy and policy, environmental education is therefore related to the ecological education.

In delivering environmental education, we have to respect the following principles:

- Addressing the environment in its totality: natural and artificial, technological and social, economic and political, cultural and historical.
- Considering environmental education as a continuous process, beginning at preschool and continuing through all formal and non-formal stages;
- Exploration of the major environmental problems from local perspective, regional, national and international, so that students to know the environmental factors also from other geographical regions;
- Focus on current and potential environmental problems, taking into account their trend in history;
- Promoting values and local needs, national and international to prevent and resolve environmental problems;
- To discover symptoms and real causes of environmental problems;
- Promoting cooperative learning.

Material and method

The eco-pedagogy is an outgrowth of developments in critical pedagogy. In order to understand the educational ideas which eco-pedagogy presents, one must first discuss and introduce the critical pedagogy approach.

With roots in Marxist and neo-Marxist critical theory, critical pedagogy represents a transformational educational response to institutional and ideological domination, especially under capitalism. Burbules and Berk (1999) define critical pedagogy as "an effort to work within educational institutions and other media to raise questions about inequalities of power, about the false myths of opportunity and merit for many students, and about the way belief

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systems become internalized to the point where individuals and groups abandon the very aspiration to question or change their lot in life".

The leaders of the movement, including Freire, Giroux and McLaren, insist that education is always political and that educators and students should become '*transformative intellectuals*, '*cultural workers*' (Freire, 1998) capable of identifying and redressing the injustices, inequalities and myths of an often oppressive world. In fact, the works of Paulo Freire, a Brazilian teacher, who was arguably the most celebrated critical educator, heavily influenced critical pedagogy. According to his writing, Freire deeply endorses ability to think critically about the educational situation; this way of thinking allows educators to "recognize connections between their individual problems and experiences and social contexts in which they are embedded" (Freire, 1998). Realizing one's consciousness ('consientization') is a needed first step of 'praxis', which is defined as the power know how to take action against oppression, while stressing the importance of liberating education.

"Praxis involves engaging in a cycle of theory, application, evaluation, reflection and then back to theory. Social transformation is the product of praxis at the collective level"(Freire, 1998). For Freire, critical pedagogy begins with recognizing that human beings, and learners, exist in a cultural context:" People as beings 'in a situation', find themselves rooted in temporal-spatial conditions which mark them and which they mark. They will tend to reflect on their own 'situationality' to the extent they are challenged by it to act upon it. Human beings *are* because they are in a situation, and they will not only critically reflect upon their existence, but critically act upon it" (Freire, 1995).

This passage taken from Freire's book "Pedagogy of The Oppressed" demonstrates the importance of space, or place to critical pedagogy's origins. Being in a situation has a spatial, geographical, contextual dimension.

Reflecting on one's situation corresponds to reflecting on the space(s) one inhabits. Acting on one's situation often relates to changing one's relationship to a place.

The purpose of critical pedagogy is to engage learners in the act Freire calls 'consientizacao' which has been defined as "learning to perceive social, political and economic contradictions and to take action against the oppressive elements of reality"(Freire, 1995). Fassbinder (2009) claims that Freirean Pedagogy offers several advantages to the teacher of environmental stewardship:

1. It suggests the *possibility of social changes*, as Freire said before his death" the future does not make us; we make ourselves in the struggle to make it" (Freire, 2004). Thus,

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Freirean Pedagogy offers an open-ended model in which the Freirean teacher can argue that learning is not merely something we do to get a better job, but something we can do to assert our rights within society and to participate in the trajectory of history (which is not preordained).

2. It suggests a **dialogic approach** to the exercise of teaching, in which, as Freire said "it is not our role to speak to the people about our view of the world, not to attempt to impose that view on them, but rather to dialogue with the people about their views and ours"(Freire, 1995). Freirean Pedagogy therefore seeks to find the language of the people in topics such as environmental crisis, and thus learn to talk with people in their own language, rather than in the scientific language of the specialists.

3. Freirean Pedagogy consciously sets to place the teacher as a "teacher-student" and the students as a " student-teacher", **making the classroom situation into a co-investigation of reality**. Just as teachers must understand the student body ethnographically, as conditioned by capitalist discipline but open to ecological discipline, thus also the students have the privileged position of being able to show what "saving the earth" means to them.

4. Freirean Pedagogy **emphasize both action and reflection** thus both students and teacher can be led to focus upon what sort of action will be efficacious in bringing about a sustainable world society.

The Freirean Pedagogy is meant to underscore one major point: the ecological crisis is fundamentally a social crisis, a crisis stemming from work and from labor discipline and so teachers focusing upon it will have to teach about society as it is, not as it should be.

In his book Kincheloe (2008) explains the central dynamics of critical pedagogy:" advocates of critical pedagogy are aware that every minute of every hour, that teachers teach, they are forced with complex decisions concerning justice, democracy, and competing ethical claims."

Kincheloe (2008) lists the basic concerns of critical pedagogy:

- All education is inherently political and all pedagogy must be aware of that condition.
- A social and educational vision of justice and equality should ground all education.
- Issue of race, class, gender, sexuality, religion, and physical ability are all-important domains of oppression and critical anti-hegemonic action.
- The alleviation of oppression and human suffering is a key dimension of educational purpose.

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- Schools must not hurt students – good schools do not blame students for their failure or strip students of the knowledge's they bring to the classroom.
- All positions including critical pedagogy itself must be problematized and questioned.
- The professionalism of teachers must be respected and part of the role of any educator involves becoming a scholar and a researcher.
- Education must both promote emancipatory change and the cultivation of the intellect –these goals should never be in conflict, they should be synergetic.
- The politics of knowledge and issues of epistemology are central to understanding the way power operates in educational institutions to perpetuate privilege and to subjugate the marginalized – "validated" scientific knowledge can often be used as a basis of oppression as it is produced without an appreciation of how dominant power and culture shape it.
- Education often reflects the interests and needs of new modes of colonialism and empire. Such dynamics must be exposed, understood, and acted upon as part of critical transformative praxis.

The task of accomplishing the above goals falls to a particular role-player, the 'committed intellectual'. McLaren (2005) expresses the role of the teacher as the 'committed intellectual' – someone for whom the end of all forms of exploitations is the focal point of her or his commitment to transform the world. The teacher is seen as an intellectual activist changing the world through the dissemination of knowledge. This notion of the teacher-activist, whose function is that of being a change agent, is meant to thrive in an environment, which needs help from activists.

Fritjof Capra (1997) suggests a definition to the term 'eco-literacy':" The great challenge of our time is to build and nurture sustainable communities - communities that are designed in such a way that their ways of life, businesses, economies, physical structures, and technologies do not interfere with nature's inherent ability to sustain life. The first step in this endeavor is to understand the principals of organization that ecosystems have developed to sustain the web of life. This understanding is what we call ecological literacy. Teaching this ecological knowledge – which may be called 'principles of ecology,' 'principles of sustainability,' 'principles of community,' or even the ' basic facts of life' will be the most important role of education in the next century".

Capra's definition wishes to answer to three major questions regarding ecological literacy: why? what? and how? (Capra, 1997).

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Why? – Context: Presently humanity's ecological footprint exceeds its regenerative capacity by 30%. This global overshoot is growing and ecosystems are being run down as wastes (including greenhouse gases) accumulate in the air, land, and water. Climate change, resource depletion, pollution, loss of biodiversity, and other systemic environmental problems threaten to destroy the natural support systems on which we depend.

What? – Systems, Networks, and Values: Problems cannot be understood in isolation but must be seen as interconnected and interdependent. We must learn to engage with complexity and think in terms of systems to address current ecological, social, and economic problems. Images can be useful tools to help with the learning process.

How? – Transformational Learning: The value-action gap (presented in sec. 2.2) permeates education for sustainability and is obvious in environmental coverage in the media. The gap between our ideas about what we value and what we are actually doing to address the problem is the notorious value-action gap. Transformative learning enables to move from values to action. This approach is integrated into cycles of action research, and practice based design work (Capra, 2008).

Transformative learning is a process of becoming critically aware of one's assumptions and then reworking the very basis of our belief systems, often to address a complex web of issues, or even an epistemological problem from a radically fresh perspective – and then to put this new perceptive into practice.

Transformative education also engages learners in constructing their learning process and is participative. Sustainability issues are deeply challenging problems and only by engaging with complexity can systemic problems be understood. Sterling (2003) explains that 'transformation learning' changes whom we are by changing our ability to participate, to belong, and to negotiate meaning.

According to Sterling (2003), the transformational learning is composed of three elements: values, knowledge, and skills. These correlate to three dimensions:

- **Seeing (perception)** - An expanded ethical sensibility or consciousness.
- **Knowing (Conception)** - A critical understanding of pattern, consequence and connectivity.

Doing (Action) - The ability to design and act relationally, integrative and wisely.

Conclusions

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Obstacles in relation to a specific programme are always context dependant. However some common obstacles and barriers can be noted:

1. *Insufficient financial support* – the management of whole school based school has to lobby for support on an ongoing basis. These efforts consume much management time and prevent the schools from doing work that is more constructive. Research reveals that socio-economic class may facilitate or inhibit sustainability education efforts, because more funding facilitates greening of facilities (e.g. serving organic food, supporting clubs and field trips).
2. *Bureaucracy* – following EE programmes often means filling in many forms and doing a great deal of writing. This may cause some schools to lose their motivation and abandon programme.
3. *Teacher's training – a shift in the teacher's role* – adopting a whole school approach to teaching and learning is viewed by many as simply impractical given current constraints on teacher's time within already overcrowded curricula.

ESD continues to be conceptualized by many practitioners as an add-on, rather than a holistic change in teaching and learning practices. To obtain support from school administrators, governments and teachers alike, it is necessary to highlight the importance of curricula integration, rather than the creation of new courses.

A variety of teaching methods other than lectures should be introduced to construct teacher's EE capability. In addition, eco-environmental training should encourage teachers to become EE researchers. Carrying out research may promote teacher's interest in finding and solving EE problems.

4. *Difficulties in creating a meaningful participation* - obstacles in this perspective are connected to the participant's interpretation of the core issues in the whole school approach – developing the student's democratic decision making competencies may become an obstacle if teachers are pushing students towards predetermined environmentally friendly individual behavior given by them or others and not taking the student's ideas and suggestions seriously. Chawla (2002) summarized some of the challenges that limit young people's involvement in authentic planning processes: time constraints, a poor understanding of child's capabilities, a belief that adult can adequately represent the perspective of children, a belief that children are unskilled and unreliable, a lack of understanding as how to facilitate participation and a fear of politicizing children.

5. *Getting the entire educational community involved* – whole school approach requires the involvement of the whole school community. Getting the entire educational community

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involvement is not an easy task. EE is often seen as a lower priority or soft option in the total curriculum and something forgotten when mentioning major priorities.

Approval by all the staff is seldom a condition for enrolling a programme – which in many cases means that the project may become a responsibility of a smaller group. This can cause a refusal by the rest of teacher's staff to participate in the programme. The diversion of a school's programme from its normal function and the involvement of students in activities other than the traditional "subjects" of the curriculum, frequently create discord and arguments coming from educators and parents. Some of the promoted changes may also cause negative reaction of residents in the neighborhood or municipality.

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