

Gauging the Potential of Socially Critical Environmental Education (EE): Examining Local Environmental problems through children's perspective

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Abstract

The objective of this qualitative research work is to detect the needs, aspirations and feelings of pupils experiencing local environmental problems and elaborate them through the prism of a socially critical educational approach. Semi-structured focus group interviews are used as a research method applied to four primary schools located near places facing environmental problems. The primary schools and their corresponding environmental problems were Agios Vasileios near the degraded lakes Volvi and Koronia, Tagarades and the 3rd primary school of Katerini located next to landfill sites, plus the 6th primary school of Kordelio which suffers from pollution caused by a nearby oil refinery. The way these problems affect the pupils and their engagement with environmental education is explored. Conventional EE practices are criticized for not being able to focus on pupils' feelings and experiences and for reproducing disempowerment. At the same time, the potential for a socially critical EE is traced both in the pupils' everyday life needs and the desires related to their welfare as well as the alleviation of their surrounding environmental degradation.

Keywords: Local environmental problems, environmental education, critical pedagogy, sustainable development, feelings, actions, critical conscientization, conflicts of interests

Environmental Education (EE) in Greece and Critical Education

EE was introduced in Greece during the 80's, although at the early stage of its existence (1980-1990) it wasn't officially included in the Greek curriculum, surviving only through the voluntary work of a few dozen committed educators working on increasing the environmental awareness of their students and support them in acquiring all the skills, knowledge,

understanding and values and preparing them to undertake action as critical citizens in the future.

The authorities of a highly centralized and inflexible Greek educational system responded only reluctantly to the newly appeared sensitivities by appointing a few dedicated officials and constructing a committee to study and propose ways to integrate EE into the Greek educational system. This they did by infusing EE issues into the conventional subject areas of the school and writing new books which displayed a pro-environmental line and/or organizing the awareness raising of teachers so as to be able to set up projects realized in a team-teaching interdisciplinary manner. (Flogaitis and Alexopoulou, 1991: 340).

Despite the annual ministry directive/circular distributed to schools since 1984 bringing EE to the attention of teachers and urging them to set up projects, it was never afforded the commensurate amount of human and financial resources, time and incentives needed. This would have created a robust community of environmentally conscious educationalists and resulted in the improvement of the status of EE.

The accumulated, and for a long time, suppressed desire of some Greek teachers (and pupils) was to abandon conventional classroom approaches and explore alternative ways of encouraging the acquisition of knowledge and skills. This resulted in a focus on the delivery of EE projects, (with its strong emphasis on intra-curricular, pupil-centered and citizen participation ingredients) as a convenient, politically and socially acceptable outlet for teachers and students alike to be able to express themselves collectively. Those teachers were favored by the earlier fall of the dictatorship (1967-1974) and the obsolete and delegitimized educational system which had been functioning without major reforms since the previous century. The combination of a self-reliant personal development factor in a period of intense social struggles with the dynamics of various progressive educational attitudes used in their work in schools (e.g. the project method) (Bazigou, 2000) led those teachers to “liberate” a part of the ministry controlled curriculum and devote it to local, small, independent of grades, voluntary projects (Solomon, 2000). Consequently, EE is characterized by a major contradiction during that period of time. On the one hand it played a facilitating role in catalyzing the precipitation of every kind of new didactic approaches, i.e. to consult their peers, study and get educated by themselves and learn from their practical experience. On the other, given the lack of recourses, communication and systematic training, teachers were left

relatively unguided as far as concerns the theory, practice and prospects of those alternative educational approaches.

A minority of committed environmental educationists with their pupils in Greece had always worked on local environmental problems in an interdisciplinary way, using experiential education methods which took them in the direction of a socially critical approach towards making their own inquiries. This would involve activities such as field trips and interviewing local inhabitants of the area. They would regularly invite “specialists” to visit their school and discuss with them the issue or problem to be examined, elaborating the collected information and people’s opinions, examining the values of the social groups involved and finally making their interests visible. In that way they were demystifying the “naturally” occurring environmentally distressful events, showing alternatives and undertaking initiatives which may well lead to problem solving.

We claim the above mentioned teachers are, knowingly or unknowingly and despite the disadvantages stemming from their poor training, functioning as embryonic critical educators. They encourage their pupils to problematize as far as concerns “environmental” problems which are really “social problems in disguise” (Cooper, 1998: 12). They construct, in a collective way, alternative and rival forms of knowledge (e.g. reveal hidden and conflicting interests of social groups) and social practices (e.g. self-management of the school based environmental group). In that way they were aiming at constructing a local microcosm of a curriculum from their own judgment as to what truly is useful knowledge (Apple, 1988) by providing space and time for the children to speak through their own stories, collective memories, etc. Through these approaches, children were encouraged to construct their own subjectivities and take into account pleasure and desire (Giroux, 1988), were helped to develop their civic skills and emerge as active and potentially participative citizens (Aronowitz and Giroux, 1986).

EE was for a long time to function only at the margins of the Greek elementary and high school daily programs juxtaposed to Greek language and maths which are the core subjects. Consequently, teachers devoted to increasing the environmental awareness level of their students were agonizing, especially in its early period to find a suitable time-slot into the school hours to convene meetings of their EE voluntary groups. These meetings, squeezed between the different duties of a “packed” curriculum, were held in order to plan future

activities, exchange information between the members of the groups, construct questionnaires, evaluate sources of knowledge and prepare the end of the academic year's celebration. At these events, results would be communicated from children themselves to their families, relatives, the nearby community and the local authorities and press. Despite the fact that they were able to engage with the previously listed activities, EE teachers and pupils have never had enough time to allow for their environmental projects to be developed properly, their methodology to be appropriately applied, their experiential approaches to be appreciated by the pupils, and their whole approach to be evaluated in such a way as to be able to pinpoint weaknesses and inadequacies.

The marginalization of EE is due to the prevailing values manifested in the meager resources, insufficient and sporadic training of the teachers and the EE educators' low prestige as far as its usefulness is concerned. This is in accordance to Giroux's (2010) dispute of the modernity's discrimination between the "center" where every single event in there enjoys more value than what happens at the "margins". Nevertheless, Greek teacher-students groups in schools seem to be satisfied with that functioning on the fringes of the timetable. They feel they give their voiceless pupils the opportunity to express themselves, and they avoid identification with such mechanisms of the school as parents thoroughly inspecting their children's "progress" or the grading system. The periphery of the school system looks to them more liberal than the center of the curriculum (Georgopoulos, 2006).

Environmental Education and its transformation to Education for Sustainable Development

In this section we are going to present a critical overview of the EE-ESD transition in the global context. In a global level, the changes in EE over the last thirty years are related to the overall crisis and reformulation of the educational system. The crisis of education is in tandem with the general crisis of capitalist relations and originates from its difficulty or inability to meet its double social role. This, on the one hand, is to provide the necessary knowledge that enables the trainees to practice with success their social role as professionals, thus successfully adjusting themselves to the division of labor, whilst at the same time to disseminate and impose on the trainees the dominant ideologies (Miliotis, 1981). We will argue below that the transformations of EE into ESD took place in order to meet its remodeled role. Namely to allocate trainees to the division of labor of the green economy i.e.

green jobsⁱ and green entrepreneurship, as well as to promote the ideology of sustainable development.

Since the 80s, the restructuring of education in Australia and Britain promoted a form of EE that is closer to an “education for environmental management” a fact described by Huckle (1993:22) as “a process of control” by the then Ministers of Education. A first milestone in this evolution is the 1992 Rio conference where sustainable development is introduced as a main international educational priority with Article 36 of Agenda 21. Thereafter, restructuring education to address sustainability issues becomes a priority for formal education at all levels (EDET GROUP, 1992). A second point that marks this procedure of EE’s transformation is the World Summit for Sustainable Development in 2002, where alternative educational frameworks such as the Earth Charter had been marginalized and Education for Sustainable Development (ESD) was promoted so as to be integrated at all levels of schooling. (Khan, 2008) After 2002, the term “Education for Sustainable Development” (ESD) is begins to establish itself and in 2005 the UN institutionalizes the initiation of the “Decade for Education for Sustainable Development” thus urging every nation to transform its educational policies accordingly in relatively short order.

However, pretty well since its emergence ESD has been criticized by many EE scholars who note its instrumentalist and deterministic nature, thus delivering and propagating experts’ ideas about sustainable development (Jickling, 2005). Others highlight its role in blurring social inequalities and dominant relations for the sake of providing appropriate environmental discourses (Gonzalez – Gaudiano, 2005) and warn about the prospect of it serving as a pedagogical “greenwash” developed by and for the business-as-usual supporters in the name of combating social and ecological disasters (Kahn, 2008). This brings us to a fundamental question: what kind of sustainable development does ESD stand for? Sustainable development is a highly politicised notion on the international political agenda and is linked to the configuration of the modern governing status. So far, there have been more than 300 definitions on the meaning of sustainable development, making it highly ambiguous (Rathzel and Uzzell, 2009) and increasingly transforming it into a buzzword uttered across all political institutions (Khan, 2008) in order to prove that they can manage today’s ecological crisis in the name of society. Sustainable development, green development and the green economy serve as equivalent notions. Green development corresponds to the premise according to which solutions to environmental protection problems are offered through their incorporation

into the capitalist system, thus contributing to a sustainable economy. Its elements are the greenⁱⁱ economy, technology, urban planning as well as the notion of sustainable development.

Alternatively, radical critique describes “sustainable development” as an oxymoron because “development” understood as capitalist growth - is just the opposite of what is required by “sustainability.” (De Angelis and Stavrides, 2010) This engages the debate as to whether capitalism can in fact manage to find a global common interest and more specifically the discourse of the environmental “global commons”. In the context of green development, the basic solution given to the protection of the global commons is their appropriation to the capitalist economy. Thus, the items in this agenda deal with the ways these profits and the new capital will function in order to promote sustainable economic growth and consequently avert environmental destruction and degradation. The paradox in this debate is that the future of capitalist growth is identified with the common interest of humanity, thus making “sustainable development” a rephrasing for “sustainable capital”.

An inseparable component of capitalist development is the realization of enclosuresⁱⁱⁱ. The new^{iv} enclosures of our time, namely, land pollution, the infringement of public spaces, the commercial use of DNA, the enclosures of wind and water are closely related to the environmental issue debate and the green development process in particular. (Midnight Notes, 1990, De Angelis, 2004). These issues remain unchallenged by the themes of the Decade of Education for Sustainable Development which omits to respond to the role of official institutions and tends to rationalize environmental problem’s causes as detached from their social and class parameters. An example of this is the reference to climate refugees which is incorporated in the ESD guidelines^v. Climate refugees constitutes a disputable notion which tends to disorientate and depoliticize the debate concerning the connections between migration and environmental change (Geisler and De Sousa, 2001:161, Black, 2001, Castles, 2002). Furthermore, it focuses on climate change as a matter exclusively of carbon dioxide emissions and fails to examine a variety of interrelated issues that influence migration, such as development policies, population control, the role of nationalism and the control of migration by the states.

Finally, we conclude that EE is being limited by educational and environmental policies in order to adhere to the notion of sustainable development thus diminishing its critical

perspective. Nevertheless, EE seems also to be at the core of the educational system's contradictions, and even today it still contains many progressive and liberal characteristics. The future of EE is not determined only "from above" as there are many grassroots agents (for example educators, schools and community members, initiatives, etc) functioning in the frame of their social environments thus setting their own priorities. We consider that their choices will influence EE's direction. This development includes the notional conflict within the scope of EE's different Paradigms^{vi} which include three major components: the positivist, the interpretive and the socially critical. (Robottom and Hart, 1993). It is an ambition of this research to contribute to the exploration of the latter's potential. There is no doubt that this potential has always existed in circumstances of highly intensive teaching situations and multiple restraints. However, it exists in the tradition of the democratic schools (for example at the Fratney and Marquette school) where there is a focus on social and environmental issues because the approach to knowledge is different (Apple and Beane, 1999:118-119) honed from real life by teachers and pupils and not drawn from a successful recipe for critical pedagogy which already exists elsewhere. Also, it exists in the socially critical forms that have been articulated in the relatively few and recent environmental education research centers at Griffith and Deakin universities (Robottom, 2005:67-68) and to the practices of the newly developed field of ecopedagogy (Khan, 2008). We consider that the more we act, research, speak and write about it, the more room and hope we create for it to appear.

The theoretical analysis presented in the first part of the article informed our original research purpose and methodology, which is the focus of the second part. In the light of the above, we consider that an EE research should not limit itself on predetermined environmental values and solutions concerning decision making (given for example by the ESD framework) but should investigate the dialogical processes in the classroom that have their roots in the pupils' cultural communities, and characterize their social and environmental living conditions. We will attempt to do that through a qualitative research which analyzes pupils' narrations relating to their communities' environmental problems.

Aim and Methodology

The aim of this research is to approach local environmental problems framed by their community's local perspective in order a) to examine the relationship between the pupils everyday lives marked by local environmental problems and EE practices conducted in their

classrooms, b) to highlight the existing disadvantages of the conventional EE model, and c) trace ingredients of a socially critical pedagogical potential. Its final purpose is to seek alternative EE approaches that have the aim to not only reclaim the pupil's critical potential but also link EE with social and environmental transformation. The basic assumption of this research work is that the conventional EE model does not challenge the social, emotional and cognitive worldviews of the pupils, is reluctant to challenge and indeed reproduces negative feelings and disempowerment and finally limits the pupil's critical potential, thus perpetuating the existing social and environmental status.

The data was collected through four semi structured focus group interviews of five to six pupils, girls and boys, ten to eleven years old. Each interview lasted about one hour and was recorded with the permission of the group members. The discussions were based on an open questionnaire which aimed to focus on 1) the pupil's perception of the local environment and the way they experience environmental problems through their local perspective, 2) school practices that show the school's attitude towards EE. The teachers had been informally interviewed before the focus group interviews and as a result, the accuracy of the questionnaire and the perceptive ability of the researcher were enhanced.

The four focus groups took place in the following schools:

- 1) Primary School of Agios Vasileios,
- 2) Primary School of Tagarades,
- 3) 6th Intercultural School of Kordelio,
- 4) 3rd Primary School of Katerini

The criteria considered in the selection of the schools had to do both with the existence of an important local environmental problem and, for practical and logistical reasons, their proximity to the city of Thessaloniki. The local environmental problems pertinent to these case studies are:

- a) the degradation of the lakes Volvi and Agios Vasileios (Koroneia),
- b) the previously active landfill site Tagarades and the experience of people in the relevant local struggle,
- c) the existing EKO oil refinery in the vicinity of Kordelio and
- d) the recent leakage of drainings from the local landfill site of Katerini.

Focus group interviews have been chosen as a research tool because of our interest not only in what pupils think, but also why they think the way they think. The focus groups consisted of children that belong to the same classroom and/or are members of the same environmental school group. That was an element which boosted our research as subjects of pre-existing groups provide also the social frame in which ideas formulation and decision making take place. (Kissinger 1994, pg 104-105) Likewise, our purpose was to categorize similar pupil's statements and thoughts that arose and to analyze them in relation to their similarities and differences. The data analysis was based on categories that arose out of the questions in the interview and also from new categories that came up during the codification of the data. Each focus group interview corresponding to a specific case study was analyzed separately, with the aim of bringing to the surface and allowing us to start constructing children's "theories" about each case study. Next, similarities and differences between case studies were examined with the aim of spotting conceptual links and developing relative theories. (Strauss and Corbin, 1990)

A piece of relevant social research should focus on the processes through which people make sense of their experience since reality is socially constructed (Berger and Luckmann, 1966). Social events related to the case studies are approached as unique instances that carry the meaning attributed to them by the participants. The methodology that enables the emergence and formulation of formal or substantive theories through the participant's perspective is Grounded Theory. The generation of a theory from the data of the social research instead of the verification of a 'grand' theory in the field is a central concept of the Grounded Theory developed by Glaser and Strauss (1967).

In this context, the researcher is not "tabula rasa" nor are social relations objective phenomena waiting for a researcher to discover. The researcher is between the data and the formulated theory and his theoretical sensitivity is influenced by personal traits as well as his subjective perception of the area under study.

Results and discussion

Beginning the analysis with a general observation, there are two key factors that appear to be influential regarding the children's responses. The first concerns the degree of the everyday experience of the environmental problem's presence. A recurrent observation throughout the

entire research shows that there is a fundamental difference between the case studies where the environmental problem is experienced directly (that is Agios Vasileios and Kordelio) and the case studies where the environmental problems are not currently active (Tagarades) or their impact is indirect and at a distance from the subject's residence (Katerini). These differences appear to be related to the intensity with which the local environmental problems are narrated by children and the emotional-empirical influence it appears to have on them.

The second key factor pertains to the occurrence of a systematic elaboration of the specific environmental issues along with their local perspective in the classroom. In the case of Agios Vasileios, pupils were involved in a “stork nests of our village” environmental project, a theme that touched upon the issue of the lake’s degradation. In Katerini, the pupils participated in the environmental group of the school and had engaged in various activities concerning their schools and the region’s environment also relating to their area’s landfill. On the other hand, the pupils of Kordelio had not engaged in a relevant project concerning the oil refinery. According to the school’s director this was due to the fact that the issue had disappeared from the public debate after the municipality had decided to accept compensatory benefits five years ago. In Tagarades, the landfill had been removed some years ago and the pupils had few memories relating to the issue and had never worked on its current aspects. Both factors are illustrated in table 1.

Region – local environmental problem	Pupils experience the consequences of the local environmental problem + directly - Indirectly	The pupils have approached the local perspective of the environmental issue as a part of their school activities + Yes - No
Agios Vasileios – degradation of lakes Volvi and Koroneia	+	+
Kordelio – air pollution produced by EKO oil refinery	+	-
Katerini – leakage from landfill site	-	+
Tagarades – ex landfill site	-	-

Table 1. Illustration of EE case studies and key factors

These factors influence the case studies which are unique in every aspect and spread through the paper's analysis. The following recurring analytical categories came up after the analysis of the focus group interviews.

Negative Feelings Derived From Local Environmental Problems

In the case studies of the schools of Agios Vasileios and Kordelio, according to the pupils narratives, the local environmental problems were perceived as sources of negative feelings (fear, shame, embarrassment, guilt, disappointment) and disempowerment. Moreover, they were directly linked with unwanted consequences on their everyday lives. These consequences had to do with the inability to walk to the lake (Agios Vasileios) and annoying smells, air pollution and soot deposited over the surrounding area which affected the children's playground caused by the EKO refinery (Kordelio). Moreover, in the case of Kordelio, where pupils grow up viewing the chimney of the oil refinery daily, there were also expressions of refusal to face up to the problem.

“it is also our fault” Agios Vasileios

“we are embarrassed” Agios Vasileios

“we feel bad that the lake is dry and it smells” Agios Vasileios

“we are unable even to walk to the lake” Agios Vasileios

“we are just a 6th grade class, what can we do?” Agios Vasileios

“I didn't feel anything is being changed” (i.e. despite the annoying smells and air pollution)

Kordelio

“I am disappointed” Kordelio

“around here everything is black” Kordelio

“concerning the EKO refinery we cannot just say «go ahead shut it down»” Kordelio

The primary sentimental reaction we experience when we are confronted with environmental degradation is characterized by negative feelings, which in the long run lead to secondary psychological reactions such as denial, apathy, etc. (Kollmus and Agyeman, 2002, Hicks, 1998, Selby, 2012). The inability to be emotionally involved in a positive way in situations of environmental degradation limits the potential for a person's engagement in pro-environmental behaviour and often leads to non-involvement (Kollmus and Agyeman, 2002, Chawla, 1999). It might be the case that the above mentioned negative feelings were compounded due to the failure of the conventional EE model – focusing on the acquisition of knowledge alone - to take the emotional component into account as important parameters of the teaching process (Hicks and Bond, 2001) thus contributing to the reinforcement of the feeling of powerlessness. (Hillcoat *et. al*, 1992).

Pupils felt similar negative feelings in the schools of Tagarades and Katerini. However, these feelings derive from current local environmental problems that now affect their everyday welfare, and which are different from previous local environmental problems that were not directly experienced by the pupils. In Tagarades and Katerini, problems described earlier in this text are remote in both time and place. In Tagarades, the most important problem according to the pupils seems to be the pollution of the sea which renders it unsuitable for swimming and playing on the beach, and not the nearby ex-landfill site which stopped functioning a few years ago. The pollution of the sea is the problem directly linked with negative feelings and disempowerment rather than the one of the ex-landfill site.

“We are ashamed of it because a foreigner might enter the sea and get spots and sicken”

Tagarades

“About the sea we can’t do anything because it’s dangerous” Tagarades

“Something could be only done by the municipality, if it does it at all” Tagarades

As far as the ex-landfill is concerned, which was supposed initially by the researcher to be the main focus of the pupils interviews, although they remember incidents such as fires burning and annoying smells, they seem to be ignorant of the deeper problems involved, residual dioxins to name just one. At the same time, the children are not aware of the possibility that their problem is part of a wider issue, the depositing of waste in landfill sites, that has not been radically solved, but is constantly being transferred from one locality to another. In the case of Katerini, the pupils seem to be poorly informed about the leaking of liquid run off from their nearby landfill site. They declare themselves ignorant of the prevailing conditions in the area around the landfill and in practice have not elaborated a response to the leaks and the smells. That’s why they can’t decide whether the affected inhabitants should come to terms with the issue or if the landfill site should be transferred to an area away from their houses.

“- we have heard that the inhabitants of the surrounding area complain about annoying smells but ok I believe they could back down from their demands, but on the other hand I don’t live there to know what are their living conditions

- I disagree with Evaggelia, I believe that the inhabitants should not back down its not their fault about the odor coming from the landfill site, I believe they should move it to another place away from Katerini where there are no houses” Katerini

In their case, the issue concerning them most is that of garbage in their neighborhood and schoolyard, the absence of cycle lanes and traffic issues. They focus on a set of more general

environmental problems which concern their neighborhood, for example, the loss of parks and public spaces, the increasing pollution, the cutting of trees, garbage, “more factories”, which tend to appear in many relevant research works (Hicks and Holden, 2007).

Consequently, in the above cases of Kordelio and Agios Vasileios, the negative feelings and powerlessness displayed by the children might be in agreement with Hillcoat *et. al* (1992), Kollmus and Agyeman (2002) and Hicks (1998) as the result of a form of EE oriented towards the transmission of cognitive elements which do not provide the necessary emotional competences to manage the anxiety emerging out of the living conditions imposed by neighbourhood environmental problems. In the last two cases (Katerini, Tagarades) children seem, instead of having negative feelings about remote environmental problems or the problems of previous years, to be disappointed or powerless related to new environmental problems which they experience more directly in their everyday lives. In this way they acquire a personal meaning for them. All in all, this finding is in accordance with Freire’s (1998) teaching method which focuses on trainee’s experiences and seeks connections between understandings and feelings.

Disempowerment Derived From Uncritical Implementation of Action as Teaching Method

Through their approach of Action Competence, Jensen and Snack (1997) make a well-targeted critique of the conventional pedagogical Paradigm and stress two points: First, the aim of an action^{vii} should focus on social and environmental change itself rather than to simply serve an “action for the sake of action” mentality. An action as a pedagogical tool should dig down to the root of the problem, propose and try to manifest alternative solutions. For example, collecting trash from a heavily degraded lake does not seem to change its situation much if the factors that cause the degradation (factory pollution, farmers’ wells, etc.) are left unaddressed. Second, the decision to act should follow an informed and rigorously debated opinion and include appropriately elaborated emotional involvement of the participants, and should not be promoted by the undue influence of any external factor. Focusing on uncritical actions in EE can even counteract the development of students’ action competence. The above critique perfectly describes those actions that have been described by the pupils and concern a) the promotion of “voluntary rubbish collecting” (collecting garbage

from the lake, the school yard, etc.) and b) the practice that has been codified as “a letter to the mayor”.

As far as concerns voluntarism, children’s statements reveal two points: 1) they are activities rather than actions (Jensen and Snack, 1997, Jensen, 2002) being dictated by the teachers themselves and 2) in the long run, they create disempowerment. In the case studies of Ag. Vasileios and Kordelio, disempowerment was directly connected to the collection of garbage.

“we have been cleaning since we were in the 4th grade. What else can a 6th grade class do? We try as much as we can” (Ag. Vasileios)

“whenever we go on an excursion in the end they make us collect all the garbage” (Ag. Vasileios)

“during physical education they make us collect the trash from the yard of the school and we try to recycle but alone we can’t make it, people will again throw their trash down” (Kordelio)

“we need someone with more experience to help us... we don’t know a lot of things” (Kordelio)

It should be noted that in the case of Katerini, unchallenged social stereotypes related to the social inferiority of the occupation of street sweeper were attributed to children by their peers, producing disempowerment. In the present research work, each group which was appointed to pick-up litter and clear rubbish was mocked by other groups not involved in that activity, an attitude that continued on a weekly basis for months. This deprived the voluntary activities of any empowerment and effectiveness potential for the children

“they made fun of each other because they were collecting the garbage with gloves and these kind of things... it’s because they consider street sweepers to be an inferior occupation...”

(Katerini)

“although we made this effort nothing changed, it just kept on going...” (Katerini)

“this year the school manager made each class collect the garbage from the yard every Friday” (Katerini)

As far as concerns the “letter to the mayor” although it is proposed to the children as a radically orientated meeting with local authorities leading to solutions, the poor results of it show it to be a simple disorienting activity and so it deprives the children of hope^{viii}. In some cases, it appears not to be the pupil’s initiative, but solely the teacher’s instruction. As a result, children neither elaborated their letter appropriately nor were they interested to know if that letter was received by the mayor at all. Moreover, the potential outcome of the activity has been neither prepared for, nor properly discussed. The “letter to the mayor” activity

produces feelings of disappointment and provokes frustration of the pupils' expectations in all the case studies that have been examined. It seems this activity can crystallize the hopes and energetic tendencies of the pupils, but it might be the case that it was never properly developed in the classroom. The subsequent frustration which built up in the children is accentuated through discussion over the multifaceted political behavior and the possibility of the mayor having different priorities.

“we have tried... we have written a letter ... but they didn't do anything..., I feel they don't count us as village's inhabitants”(Ag. Vasileios)

“we had tried to make cycling lanes in Katerini but the mayor said that his priority is to make pedestrian streets... and that disappointed me” (Katerini)

“once we sent a letter to the mayor but he didn't reply... and as far as I recall nothing happened (...) what a waste of a pencil”(Tagarades)

“When we attended the second or third grade, we had a course about the environment and it involved sending a letter to the mayor of our municipality to inform him about the problems... but in the end we didn't send it” (Kordelio)

Missing out the rigorous discussion on the content and the aims of the letter in a way which is non-patronising to the young people and which would help them to approach the task with realistic expectations inevitably leads to the pupils disappointment. There is no clear and direct evidence about the degree of children's participation in the “visit to the mayor” or “letter to the mayor” preparation and implementation. Nevertheless, previous statements about the collection of rubbish in the preceding paragraphs include the “they made us collect” ingredient. This evidence permits us to extrapolate the same teacher-pupil relationship as far as concerns the “visit to the mayor” activity. That element concurs with the first three rings of Roger Hart's (1992) ladder of participation (manipulation, decoration, tokenism) and perhaps explains the fact that, in one case at least, the letter was written but never sent to the mayor - a clear sign of resignation.

Even in the cases where the letter was sent and was followed by a meeting with the mayor, the result was again disappointing for the children. Most probably, the status of the mayor had been described in the classroom as an appropriate individual to receive proposals and deliver solutions and less as a person participating in an official institution that functions and makes decisions in a rather complex way. Therefore it seems that the children's encounter with the mayor took place in an uncritical and superficial manner.

“when we visited the Center of Environmental Education the mayor came also and we told him our problems, that happened three years ago when we attended the third grade and... it’s just that nothing has happened from all this he has said three years ago” (Kordelio)

“The mayor read our letter, came to our classroom but afterwards he did not listen to our demands” (Katerini)

That was a clear situation producing disempowerment, shaped by feeling manipulated and by being ashamed when ignored. (Hart, 1992) The teachers ‘used’ the children as tools to reach their own EE objectives, instead of helping the kids to reach their own. Finally, we should take under consideration that participation, especially public participation is a highly contested notion. Public participation may serve as a legitimate or even legally compulsory political tool to mainstream marginalized views, co-opt and conscript them into the prevailing political agenda. (Kothari and Minogue, 2002:11).

The Potential for Socially Critical EE

This research work finds that pupils everyday life needs to be related to their welfare as well as their desire to alleviate environmental degradation in their surroundings, and it is this very parameter which constitutes the fertile ground in which lies the potential of socially critical EE. This potential has been traced through a) the emergence of socially critical EE school practices, b) the educational dynamic of pupils’ interesting commentaries and confrontational points that appeared during the interviews, c) the expression of pupil’s alternative proposals as indirect efforts to solve their social and environmental problems and d) the intrinsic value of group interviews as a possible part of a wider critical educational process.

a) Through the focus group interview in Agios Vasileios, a specific teaching method was identified which along with the appropriate elaboration of its results, seems to have promoted both critical reflection and a desire within the pupils to take action. This had happened with the realization of a group discussion in the classroom with elder people of the village concerning the history of the lake. The meeting empowered the pupils and stimulated them to act reminding McLaren’s (2010) approach to empowerment which he defines as a situation in which children desire to transform rather than simply serve the social world order.

“at the beginning we hadn’t got involved but I remember that some elder people came and they talked to us about the past years, and my grandfather came... he spoke to us of the lake’s fish (grivadi) and the history of the lake and he involved us, our grandfathers activated us” (Ag. Vasileios)

It seems that through their interaction with the elder fishermen, the children compare their contemporary situation to the recent past characterised by ecological balance, and draw hope from the possibility that the past can be recreated. Also, they express positive wishes for the future and the vision of an improved everyday life.

“our grandfathers some time ago did a lot of things with the lake and I would also like that the lake continues to exist so that we do the same” (Ag. Vasileios)

“we had the most beautiful fish (grivadi)” (Ag. Vasileios)

“we all would like to have the old lake that existed in the past years because it was more beautiful and we could swim there” (Ag. Vasileios)

Elements that contribute to the formation of this source of hope appear to be the emergence of collective identity, local distinctiveness and a sense of connectedness and belonging (Hicks, 1998). The same children in a different part of the interview seem to have been able to elaborate their negative feelings, previously mentioned in section 3.1 of this article, towards positive perspectives of their everyday environmental reality, thus indicating the potential for change.

“to establish a better civilization” (Ag. Vasileios)

“to make the village as it used to be in the past years and to remain that way” (Ag. Vasileios)

“to change the whole country” (Ag. Vasileios)

“if the lake fills with water anything can be done” (Ag. Vasileios)

Unfortunately, this potential for change remains limited as the above mentioned practice, conducted three years ago, remains an isolated event. Since then it has been abandoned, therefore amounting to only an exception from the rule of dominant education. The consequence of this is that it leaves children unaware of the deeper repercussions of their potential, were they to continue their involvement and take action towards influencing their community to more environmentally friendly ways of managing the lake. That missing parameter is the one depriving children from developing a critical awareness of their social reality through reflection and action which is one of the basic ingredients of the notion of critical conscientization (Freire, 1973). Critical conscientization can not only reclaim the pupil’s critical potential but also link socially critical EE with social and environmental transformation.

b) Curriculum scholar Henry Giroux (1981) searches for those instances in the classroom when critical conscientization is possible, and prompts critical educators to seize the positive moments that exist amidst the cracks and disjunctions created by oppositional forces that are only partially realized in the schools. In Kordelio's focus group interview, when discussing about the problem of garbage and its connection to refuse collectors' strikes, a statement emerges which could be the starting point of a discussion concerning the potential for a wider social realization and concomitant action. The pupil comments on the inability of citizens to transcend partial/isolated departmental strikes in a way that reflects a public debate which is also most probably conducted within the children's families.

“it is also our fault with these people that go on strikes and we don't join them and afterwards we say that they are wrong while afterwards we ask for a strike for ourselves” (Kordelio)

Such moments arose in the focus group interviews both in interesting commentaries and “points of dispute” and are considered to be an initial foetal core of critical conscientization constituting a dynamic to be exploited into the socially critical EE. By the term “points of dispute”, we refer to intense expression of conflicting opinions during the pupils' dialogues that question existing presumptions and create doubt about the existing social order. In Agios Vasileios, a conflict between pupils took place during the focus group interview where the motives of their grandfathers who had met with the children were debated, and questioned. What followed was the emergence of the issue's different aspects, i.e. the role of industries, farmers, the economic crisis, which reveals the potential for critically understanding the issue. At the same time, the prospects for a critical educator to enhance not only a course relating to EE but several subjects of the curriculum are highlighted.

“- Because if some elders are interested in this, it's because they own fish taverns and they used to fish from our lake to make money
- One hundred per cent, the farmers will always take water from the lake (interruptions, disagreements)
- Yes, but one factory that used to pollute the lake has shut down because it was sued about the pollution
- But now with the economic crisis it's better for the farmers to take water from the lake rather than the tap because they pay too much money ” (Ag. Vasileios)

In Katerini the pupils identify the voters of the Green party of Greece as the active agents of environmental change and consequently expect environmental issues to be solved through elections, a statement which is opposed by another interviewee who disputes the probability

of environmental matters being resolved by any government, as the Katerini children dialogue below shows.

- “- I believe those who are interested in the environment vote for the Green Ecologists
- I believe that there are more people that are interested and that it's those people who have great wealth that are not interested in the environment” (Katerini)
- I agree with this about the rich people but I don't believe those who are interested in the environment vote for the Green Ecologists because the elections have to do with those who want to govern better whereas the environment has nothing to do with that...” (Katerini)

If these conflicts were expressed in the framework of critical pedagogy's discussion, they would resemble the notion of dialogue which in Freire's pedagogy is a method to create the liberating pedagogical relationship. According to Freire (1972) dialogue is an encounter, mediated by the world itself, between people in order to make sense of the world. It constitutes a social act as well as the starting point for politicization potential and the raw material for building the political dimension of speech. In dialogues pupils develop the ability to wonder about people's interests and conflicts between social groups and learn to confront each other since dialogue gives value to conflicts and works to overcome^{ix} it (Gadotti, 1994). Thus, the above mentioned points of dispute amount to be fragments of a developing dialogue which in its critical form takes into account conflict as a legitimate formation and relies on it as a means of fully realizing genuine dialogue.

A second reason why the focus on pupil's conflicts and points of dispute create fertile yet unexploited material for socially critical EE is their connection to conflicts of interest which is an indispensable element of debates concerning environmental and social issues.

Lundegård and Wickman (2007) conclude that value judgments dealing with conflicts of interest between social groups are a foundation upon which the dialogue on environmental issues is constructed. Moreover, they seem to be a prerequisite if the dialogue is not to come to a standstill. The conflict perspective is a part of the “action competence” model which is closely related to fundamental ideas in critical theory. Critical theory argues that the identification of the conflict of interests is more effectively representing reality and probes more powerfully into the nature and causes of our social world, than other approaches (Gibson, 1986 via Breiting et al., 1999).

c) Another observation concerning the pupil's comments marks the potential of a positive vision for an environmentally friendly community. This vision is expressed by alternative

proposals which the pupils have promoted with the “letter to the mayor” activity. In the case of Agios Vasileios, the children disagree with the municipality’s policy to turn its back on the degraded lake and propose building a park next to it. They hope it will become a flagpole that will attract again the interest of the inhabitants and more specifically the mothers that will be able to visit the lake with their children. In Kordelio, the pupils propose the building of a new school in their neighborhood’s open space, so as to get rid of the mounting trash problem.

“some people are considering to beautify our village without the lake... we want to make a park near the lake... there are many small children who request from their mothers to be taken to the lake...so they could get attracted by it and be interested in it again” (Ag. Vasileios)
“we asked from the mayor to build a new school...because in our neighborhood’s open space there are many garbage and if the 3rd High school is build there, there will be less garbage... and more space for us to play” (Kordelio)

The common element of these proposals is that they aim to solve the environmental problems in indirect ways through the avoidance of the social condition that maintains them. It resembles on the children’s behalf an effort to bypass social constraints such as the indifference and resignation of the local community and the inactivity of official institutions in order to achieve either a solution (Kordelio) or an improvement to its condition (Ag. Vasileios). Although the pupils are unable to perceive themselves as active agents of the change they propose, what is evident is their will and desire to tackle in any way possible the environmental problems of their surroundings and improve their living conditions. As it may be, through this observation we locate a dialectical tension between the present and the future similar to what Paulo Freire (1973) refers to as a utopian vision that can move the educator and the pupils to action. In the cases of Agios Vasileios and Kordelio, the underlying presence of a positive vision on behalf of the pupils, constitutes an element that can possibly become a flourishing beginning point for a critical educational practice.

d) Finally, the intrinsic value of a critical research process, in which a group interview can be a prominent part is highlighted. At the end of the focus group interviews, the pupils expressed positive feelings about the interview process and made statements of empowerment.

Disempowerment connected to their young age seemed to be less evident. They perceived their disagreements as positive elements of their discussion that gave them joy and they were relieved that their fear of being subjects of another scientific monologue which would be imposed upon them was unfounded. Moreover, they perceived the researcher’s presence and

the interview process as an effort to involve them in its own right as well as something they learned from.

“I felt more ecologist... I felt as if I was an adult saying all this” (Katerini)

“I liked what we did, it has done to me good and I liked that we agreed and disagreed in some issues, I agree with all the others” (Katerini)

“And I believe you psychoanalyzed us... it was like a burden had been removed” (Ag. Vasileios)

“This action begins from us because we are still young we can do a lot of things in the future” (Tagarades)

“I basically liked the discussion we had, I didn’t believe I would have such an opportunity” (Kordelio)

“We spoke about what hurts us, we want our village to become again as it used to be in the past because it is a beautiful village” (Ag. Vasileios)

“I was encouraged because somebody tried to do something...other people are interested too, people that do not necessarily live in this village” (Ag. Vasileios)

Some of the above statements-which were made to an interviewer trained in experiential educational approaches-are reminiscent of one of the basic virtues, namely the ability to listen to the Other (Bakirtzis, 2000). This results in the respondents feeling safe enough to be able to expose their fears and anxieties and overcome their pessimism and despair as the statements in the beginning of section 3.3. suggest. Using the above experiential approach as a didactic tool to critically analyze and ultimately lead to the conscientization of the existing forms of authority and exploitation could contribute to a pedagogical process which liberates at a personal as well as at a social level. In that sense, this research process became a source of hope for the pupils in its own right (Hicks, 1998). Through the interviews, pupils were encouraged to participate in the adventure of a critical dialogue which includes risks and uncertainties as well as substantial mental and bio-psyche pleasures (Liambas and Kaskaris, 2012). To a point, it reminds us of Erich Fromm’s comment, which characterizes Freire’s teaching method as a kind of historico-cultural, political psychoanalysis (Freire, 1992). The above mentioned statements demonstrate the importance and the prospects of an experiential critical process, yet, they also reveal the limits of individual actions. Nevertheless, experiencing that positive atmosphere it is important to consider Paulo Freire’s (1992: 103) self-criticism made in his work “Pedagogy of Hope” in which, simply exposing a condition of exploitation (and the relevant positive emotions emerging out of that elaboration) should not be identified with an authentic condition of critical conscientization. The latter requires a long term process and the elaboration of new knowledge serving as a tool for the change of everyday life.

Conclusion

EE is both subject to and is a carrier of the educational system's contradictions, a system which is in crisis and undertakes transformations. On the one hand, EE constitutes an innovative educational field with many liberal elements while on the other, it undergoes major changes which reorganize its social role, function, aims and contexts. This evolution has been ongoing since the 80s (Huckle 1993) and its Greek version is described in this article. In Greece, EE has shared many similarities with critical pedagogy as EE educators seem to have functioned, knowingly or unknowingly, in many aspects as embryonic critical educators. Nevertheless, the overall tendency we trace in European and at the global level is the limitation of EE's scope to a managerial and instrumentalist education (as that expresses itself within the agenda of ESD) thus diminishing its critical perspective.

Through focus group interviews we have attempted to trace the potential of a socially critical EE in relation to the four communities' environmental problems within their local perspective. The results after the analysis of the focus group interviews are as follows:

- Negative feelings deriving from local environmental problems exist in all case studies and seem to remain unaddressed by school practices. They are related to local environmental problems that are directly experienced by the pupils. Therefore in the cases of Kordelio and Agios Vasileios negative feelings are connected to the main problems of the area, whereas in Katerini and Tagarades, due to the fact that the main problems are geographically distant or remote in time (and considered solved), the pupils statements tend to be distorted into concerns about/with other local environmental problems. The common characteristic of the latter environmental problems is their direct consequences on the pupils every day welfare needs and desires.
- As far as concerns implementing EE practices, tasks such as "rubbish collection" or "the letter to the mayor" have been examined and criticized as activities rather than actions (Jensen and Schnack, 1997) or praxis (Freire, 1970). In the above context, those practices do not confront the disadvantages of conventional educational responses to environmental problems. On the contrary, they seem to reproduce disempowerment.

- Local environmental problems provide a rich potential for an alternative, socially critical EE practice. That potential has been traced through a) analyzing specific school practice which knowingly or unknowingly seem to have promoted critical reflection and involvement, e.g. the discussion with elder fishermen in Agios Vasileios, b) highlighting pupils interesting commentaries and points of dispute as potential elements of a critical dialogue as well as discussing the importance of identifying conflicts of interest, c) focusing on pupil's alternative proposals as embryonic carriers of a positive environmental and social vision and d) approaching the focus group interview process as a possible part of an experiential and socially critical educational practice.

ⁱ According to the United Nations Environment Program, green jobs refer to work in agricultural, manufacturing, research and development, administrative, and service activities that contribute substantially to preserving or restoring environmental quality.

ⁱⁱ Some examples green development's sectors are: green stock market (concerning pollution rights and off-set mechanisms), green transportation, ecotourism, bioclimatic, sustainable urban planning, renewable energy technologies, ecogadgets with a reduced ecological footprint, ecoproducts, ecological food and drinks, etc.

ⁱⁱⁱ The phenomenon of enclosures begins in the middle ages and its generalization is situated in the beginning of capitalism (17th-18th century) in Great Britain with the enclosure of communal – common land and the processes of primitive accumulation. In contrast to orthodox Marxist tradition, more radical approaches argue that the processes of enclosures did not exhaust at the dawn of capitalism but are constantly expanding being tied up with primitive accumulation which is the indispensable element of capitalism. Therefore, capitalism is being reproduced through old and new enclosures (Bonefeld, 2001, De Angelis 2001, 2004, Midnight Notes, 1990)

^{iv} Some examples of new enclosures relating to green development are: the introduction of biotechnology patents in agricultural seeds (see terminator technology) and in corporate ownership of traditional therapeutic herbs, introduction of ownership legislations in wind energy claiming rights on the air (wind harvesting) over specific lands, property rights on renewable energy technologies, deforestation and change of local land use for the promotion of cultivation of agrofuels, water enclosures (dams, exclusive use of water springs and river branches, water privatizations), land pollution (for example Ogoni land in Nigeria, intense shrimp production in India, etc). (De Angelis, 2004)

^v See example the Coordinating Committee for International Voluntary Service, Education for sustainable development: guidelines and kit for IVS organisations, <http://www.unesco.org/ccivs>

^{vi} The positivist paradigm predominantly serves the vocational human interest, the interpretive paradigm mainly serves the personal interrelation with the environment human interest and the socially critical paradigm which predominantly serves the social change human interest (Huckle 1993, Robottom and Hart, 1993).

^{vii} The difference between action and activity according to Jensen and Schnack can be approached in similar way with the difference between action and praxis according to Freire. Freire (1970: 5) makes a distinction between “praxis” and “action” highlighting that “action not being praxis, it is action ignorant both of its own process and of its aim”

^{viii} This observation goes along with Freire's (1997: 9) view according to which hope, as an ontological need demands an anchoring in practice... without the struggle, hope, dissipates, loses its bearings, and turns into hopelessness.

^{ix} The British drama in education specialist Dorothy Heathcote (1984) characterised conflict in typically blunt Yorkshire terms as “Big-uns telling little-uns what to do”. Her contention was that this was as true for children's encounters in the playground as it is for any important decision making process. Her life's work was dedicated to overthrowing this maxim by providing children with the tools to engage in the debate.

References

- Apple, W.M. and Beane, A.J. (1999) *Democratic schools: lessons from the chalk face*. Buckingham: Open University Press.
- Apple, W.M. (1988) Supporting democracy in education. In: Apple, W.M, *Teachers and texts: A political economy of class and gender relations in education*, New York: Routledge.
- Aronowitz, H. and Giroux, H. (1986) Curriculum theory and the language of possibility. In Aronowitz, H. and Giroux, H. *Education under siege: the conservative, liberal and radical debate over schooling*, London: Routledge and Kegan Paul.
- Bakirtzis, K. (2000) *Epikoinonia kai agogi [Communication and education]*. Athens: Gutenberg.
- Berger, P.L. and Luckmann, T. (1966) *The social construction of reality: a treatise in the sociology of knowledge*. Garden City, N.Y.: Doubleday.
- Black, R. (2001) 'Environmental refugees: myth or reality', *UNHCR New issues on refugee research*, Working Paper No. 34. Online at <http://www.unhcr.org/research/RESEARCH/3ae6a0d00.pdf>
- Bollier, D. (2002) 'Reclaiming the Commons: why we need to protect our public resources from private encroachment'. *Boston Review*. Online at <http://www.bostonreview.net/BR27.3/bollier.html>
- Bonefeld, W. (2001) 'The Permanence of Primitive Accumulation: Commodity Fetishism and Social Constitution'. *Commoner n. 2*. Online at <http://www.commoner.org.uk/02bonefeld.pdf>
- Breiting, S., Hedegaard, K., Mogensen, F., Nielsen, K., Schnack, K. (1999) *Action Competence, conflict interests and environmental education – The MUVIN Programme*. Odense: Odense Universitetsforlag. Online at www.MUVIN.net
- Bromley, D.W. (1991) *Environment and Economy: Property Rights and Public Policy*. Oxford: Blackwell Publishers.
- Castles, S. (2002) 'Environmental change and forced migration: making sense of the debate', *UNHCR New issues in Refugee Research*, Working Paper No.70. Online at <http://www.unhcr.org/research/RESEARCH/3de344fd9.pdf>
- Chawla, L. (1999) 'Life Paths Into Effective Environmental Action'. *The Journal of Environmental Education*, 31(1), pp. 15–26.
- Cooper, G. (1998) *Outdoors with young people*. Dorset: Russel House Publishing.
- De Angelis, M. (2001) 'Marx and primitive accumulation: The continuous character of capital's "enclosures"'. *Commoner n. 2*. Online at <http://www.commoner.org.uk/02deangelis.pdf>
- De Angelis, M. (2004) 'Separating the doing and the deed: capital and the continuous character of enclosures'. *Historical Materialism*, 12(2), pp. 57-87.
- De Angelis, M. (2009) 'The tragedy of the capitalist commons'. *Turbulence 5*, London: Turbulence. Online at <http://turbulence.org.uk/turbulence-5/capitalist-commons/>
- De Angelis, M. and Stavrides, S. (2010) 'On the Commons: a Public Interview'. *e-flux j. 17*, Online at <http://www.e-flux.com/journal/view/150>
- EDET Group (1992). *Good earth-keeping: education training and awareness for a sustainable future*. Environment Development Education Training Group. London: UNEP.
- Finger, M. (1994). 'From knowledge to action? exploring the relationships between environmental experiences, learning, and behavior', *Journal of Social Issues*, 30(3), pp.141-160.

- Flogaiti, E. and Alexopoulou, I. (1991) 'Environmental education in Greece', *European Journal of Education*, 26(4), pp. 339-345.
- Freire, P. (1970) *Cultural action for freedom*. Cambridge, Massachusetts: Harvard Educational Review and Center for the Study of Development and Social Change.
- Freire, P. (1972) *Pedagogy of the oppressed*. New York: Continuum.
- Freire, P. (1973). *Pedagogy for critical consciousness*. New York: Seabury Press.
- Freire P. (1992) *Pedagogy of hope: reliving Pedagogy of the oppressed*. New York: Continuum.
- Freire, P. (1998) *Teachers as cultural worker: letters to those who dare teach*. Boulder, CO: Westview Press.
- Gadotti, M. (1994) *Reading Paulo Freire: his life and work*. Albany: State University New York Press.
- Geisler, C. and De Sousa, R. (2001) 'From refuge to refugee: the African case', *Public administration and development*, 21, pp. 159 – 170.
- Georgopoulos, A. (2006) 'Postmodernism, education, environmental education', *Themes in Education*, 6(2), pp. 143-151.
- Gibson, R. (1986) *Critical theory and education*. London: Hodder and Stoughton Educational.
- Glaser, B. and Strauss, A. (1967) *The Discovery of grounded theory*. USA: Aldine.
- Giroux, H. (1981) *Ideology, culture and the process of schooling*, Philadelphia, U.S.A.: Temple University Press.
- Giroux, H. (1988) 'Border pedagogy in the age of postmodernism', *Journal of Education*, 170 (4).
- González-Gaudiano, E. (2005) 'Education for sustainable development: configuration and meaning', *Policy Futures in Education*, 3(3), pp. 243–250.
- Hart, R. (1992) Children's participation: from tokenism to citizenship, *Innocenti Essay 4*. Florence: UNICEF ICDC. Online at http://www.unicef-irc.org/publications/pdf/childrens_participation.pdf
- Heathcote, D. (1984) *Collected writings on Education and Drama*, London: Hutchinson.
- Hicks, D. (1998) 'Stories of hope: a response to the "psychology of despair"', *Environmental Education Research*, 4(2), pp. 165-177.
- Hicks, D. and Bord, A. (2001) 'Learning about global issues: why most educators only make things worse', *Environmental Education Research*, 7(4), pp. 414-425.
- Hicks, D. and Holden, C. (2007) 'Remembering the future: what do children think?', *Environmental Education Research*, 13(4), pp. 501–512.
- Huckle, J. (1993) Environmental education and sustainability: a view from critical theory. In: (Fien, J., ed) *Environmental Education: a pathway to sustainability*. Australia: Deakin University, pp. 43-68. Online at http://john.huckle.org.uk/publications_downloads.jsp
- Jensen, B. and Schnack, K. (1997) 'The action competence approach in environmental education', *Environmental Education Research*, 3(2), pp. 163-178.
- Jensen, B. (2002) 'Knowledge, action and pro-environmental behaviour', *Environmental Education Research*, 8(3), pp. 325-334.
- Jickling, B. (2005) 'Sustainable development in a globalizing world: a few cautions', *Policy Futures in Education*, 3(3), pp. 251–259.
- Kahn, R. (2008) 'From education for sustainable development to ecopedagogy: sustaining capitalism or sustaining life?', *Green Theory and Praxis: The Journal of Ecopedagogy*, 4(1). Online at http://www.academia.edu/163841/From_Education_for_Sustainable_Development_to_Ecopedagogy_Sustaining_Capitalism_or_Sustaining_Life

- Kahn, R. (2003) 'Paulo Freire and eco-justice: updating pedagogy of the oppressed for the age of ecological calamity', *Freire Online Journal*. Online at <http://getvegan.com/ecofreire.htm>
- Kothari, U. and Minogue, M. (2002) Critical Perspectives on Development: An Introduction. In: *Development theory and practice : critical perspectives*. New York: Palgrave, pp. 1–15.
- Kollmus, A. and Agyeman, J. (2002) 'Mind the gap: why do people act environmentally and what are the barriers to pro-environmental behavior?', *Environmental Education Research*, 7(3), pp. 239-260.
- Lundegård, I. and Wickman, P. (2007) 'Conflicts of interest: an indispensable element of education for sustainable development', *Environmental Education Research*, 13(1), pp. 1-15.
- Liambas, A. and Kaskaris, I. (2012) 'Dialog and the love in the work of Paulo Freire', *Journal for Critical Education Policy Studies*, 10(1), pp. 185-196. Online at <http://www.jceps.com/PDFs/10-1-13.pdf>
- McLaren, P. (2007) Critical Pedagogy: An overview, In: *Life in Schools. An Introduction to Critical Pedagogy in the Foundations of Education*, Boston MA: Ally and Bacon.
- Midnight Notes. (1990) The new enclosures, Available at <http://www.midnightnotes.org/newenclos.html>
- Milios, G. (1981) *Ekpedefsi kai Eksousia [Education and Power]*. Athens: Kritikh.
- Rathzel, N. and Uzzell, D. (2009) 'Transformative environmental education: a collective rehearsal for reality', *Environmental Education Research*, 15(3), pp. 263-277.
- Robottom I. and Hart P. (1993) *Research in environmental education: engaging the debate*. Australia: Deakin University Press.
- Robottom, I. (2005) Critical Environmental Education Research: Re-engaging the Debate, *Canadian Journal of Environmental Education*, 10(1), pp. 62-78. Online at <http://cjee.lakeheadu.ca/index.php/cjee/article/viewFile/178/15>
- Selby, D. (2012) 'Thoughts from a darkened corner: sustainability education in times of crisis', In: *proceedings of the 6th Conference on Environmental Education*, Panhellenic Teacher's Union of Environmental Education, Thessaloniki, November 30, Greece. Online at <http://peekpemagazine.gr/article/thoughts-darkened-corner-sustainability-education-times-crisis>
- Solomon, I. (2000) 'Is the "Closed School" Dead? Voluntary Educational Programs and Evaluation', In: G. Bagakis (ed.) *Voluntary Educational Programs in the School*, Athens: Metaichmio.
- Strauss, A. and Corbin, J. (1990) *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. USA: SAGE Publications, Inc.

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