

# THE CONTRIBUTION OF NGOS IN ENVIRONMENTAL EDUCATION: AN EVALUATION OF STAKEHOLDERS' PERCEPTION

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## Introduction

Environmental education is a field of knowledge and pedagogic activities, internationally developed over the last decades, with the objective of understanding and offering answers to a set of problems arising from relationships involving society, namely education and the environment. Quickly growing, environmental education has extended its performance beyond the scope of schools. Environmental education not formally practiced by social organizations presents itself as a new teaching method, aimed at changing habits, attitudes and social practices which indicate a solution to social-environmental degradation afflicting the contemporary world. In this context of risks, uncertainties and dilemmas, investing in education aimed at a behavioral model which creates a new relationship between humanity and nature denotes a strategic connotation regarding environmental education.

Concern for the necessity of promoting educational strategies related to the environmental conservation and, by extension, improving the conditions of life on the planet, emerged in the end of the 1960s and the beginning of the 1970s, with a strong surge of the environmental movement in the United States, provoking a new position among a large part of the public opinion. This movement revealed the necessity of a larger and continual effort regarding the finite nature of natural resources, the adoption of the principle of rationing their use and that environmental protection and economic growth should not be antagonistic.

The publication, in 1997, of the report "Our Common Future", from the World Commission on Environment and Development, alerted the governmental authorities about the need to adopt public policies with the objective of reaching a state of sustainable development, "which satisfies the needs of the present without hurting the possibility of future generations from satisfying their needs." The recommendations found within this report were fundamental in founding the Conference on the Environment and Development in 1992 in Rio de Janeiro, Brazil. The Treaty on Environmental Education for

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Sustainable Societies and Global Responsibility, generated in the International Forum of NGOs, an event parallel to Rio 92, defined the principle fundamentals of education regarding sustainable societies, reiterating the need for critical thinking, inter-disciplinarity, multiplicity and diversity.

Another important document resulting from the Rio de Janeiro Conference is Global Agenda 21, an action plan for the implementation of sustainable development. The document, in its preamble, requests that the nations unify themselves in the quest for sustainable development, affirming the importance of public participation and the involvement of Non-Governmental Organizations (NGOs) in this process. In Chapter 27 "Strengthening the role of non-governmental organizations: partners for sustainable development" the importance of the participation of NGOs is reinforced, emphasizing the value of their varied experiences, specialized knowledge and capacity for action in order to analyze and implement sustainable development.

Agenda 21 also reinforced, in chapter 36, "Promoting education, public awareness and training", the importance of the role of education in reaching a model of development which takes the pressures on the environment into consideration, as education, increasing public consciousness and training are transversal themes among all the areas of the programs of Agenda 21. According to the prescripts of the document, the most varied programs in the field of education must be promoted together with the collaboration of NGOs. In 1997, the Thessaloniki Declaration reinforced the fundamentals announced in the Rio de Janeiro Conference, determining that Environmental Education acts would be carried out based on the concepts of ethics and sustainability, cultural identity and diversity, mobilization and participation, as well as inter-discipline practices (JACOBI, 2005).

The Johannesburg Summit, held in 2002, amplified the concept of sustainable development and proposed the creation of a Decade of Education for Sustainable Development, as a way to point out that education and learning are at the heart of the approach towards sustainable development. In the same year, the General Assembly of the United Nations adopted the Resolution instituting the UN Decade of Education for Sustainable Development from 2005 to 2014.

The Final Report for the Decade of Education for Sustainable Development (UNESCO/UNEP, 2005) highlights the importance of the role of civil society and NGOs as organizations which must stimulate citizens' sensibilities, campaigns and pressure groups, provide consulting and contribute to the formulation of public policies, implement education on sustainable development, especially in non-formal educational spaces, promote learning and participate and mediate relations between the government and the public.

Non-formal education, the goal of the educational work of NGOs, refers to organized activities, international in nature, held outside of formal educational institutes, with a certain degree of systemization and structure, with the objective of offering select types of education to specific subgroups of the population (COLLEY et al, 2002; TRILLA, 1996; LA BELLE, 1980).

In Brazil, environmental NGOs have held an important role in the process of expansion and widening non-formal environmental education acts and often sparking governmental initiatives and giving support to private organization initiatives which are

interested in the development of projects within the area. These organizations are part of the group of interested parties worried about the problematic nature of the environment. They are called stakeholders of environmental demands and include the following: state organizations charged with protecting the environment, public administrators, scientific institutions and groups, private business administrators, press, professionals connected with implementations of an environmental nature in the management of production processes, “green” consumers, the academic community, citizens and others.

The work uses the Delphi method to identify the perception and expectations of the interested audience (stakeholders) regarding the contribution of environmental NGOs on non-formal environmental education. It has adopted the expression “environmental education” considering the three axes of sustainability: the environment, including the resources and the fragility of the physical environment, society, encompassing culture, participation, public opinion and the media, and the economy, considering economic growth and its impact on society and the environment. The name NGO (Non-Governmental Organization), widely used in literature on the subject, is applied in a general form to all the organizations of the social sector, without ignoring the different juridic regulations implemented by State Reform starting in the 1990s: Social Organizations (OS) and Civil Society Organizations of the Public Interest (OSCIP).

### **Society of risk and complexity: challenges for environmental education**

The concept of complexity has been used to characterize the world stage and the problems presented within, such as demographic growth, wealth distribution, the erosion of cultural characteristics due to globalization, conflicts among nations, ethnicities and religious communities, and environmental deterioration, leading to the configuration of a multi-risk, complex and insecure world. Understanding the complexity of the world and culture demands more integrated analyses, as the reality is multifaceted. Some authors, such as Morin (1999 and 2000) and Capra (1988), state that the modern world is faced with several challenges, related to fragmented thinking due to the rationalism of the modern era.

Specifically in the field of education, the impact of modern life is made particularly clear in a new educational paradigm, based off of the idea that a globalized world presupposes the elimination of barriers across all dimensions of human existence, destroying old parameters serving as reference points in the modern industrial society, as a way to order social life and human activities in general.

The need to address the issue of environmental complexity arises both from the incipient and the multiple existing possibilities and thinking about reality in a complex manner, defining it as a new rationality and a place which joins nature, skills and culture. Reflection upon environmental complexity opens a stimulating space for understanding the management of new social players that prepare themselves towards the ownership of nature, for an educational process committed to sustainability and participation, based on logic that improves dialogue and interdependence among different areas of knowledge. But also questions values and premises that guide the prevailing social practices, implying

a change in thinking, a transformation in the world of knowledge and educational practices (JACOBI, 2003, p.189).

The scenario of modern society is characterized by a radicalization of modernity, meaning that society is faced with a modern lifestyle victimized by risks, uncertainties and dilemmas, arising from its own actions, and which now requires it to confront the realities arising from its behavior and uncovering paths which lead to overcoming this stage. This society is named the society of risk by Giddens (1991) and Beck (1992).

As Lenzi (2005) displays, the works of Beck and Giddens approach important concepts for an appropriate understanding of the modern environmental degradation and of the changes and conflicts that emerge surrounding this problem. For these authors, three basic elements identify the society of risk: the existence of environmental risks, which are, according to the authors, the most emblematic indicators of the society of risk; humanity's dependence on scientific knowledge regarding environmental problems; and the political consequences of these changes and environmentalism itself in modern societies.

The risk theory in modernity developed by Giddens (1991) and Beck (1992) offers a reference point for understanding modern social-environmental issues, and more specifically, for creating a discussion on the possibilities of environmental education as a mediating element of human *praxis*, since it presents itself as a new educational method linked with changing habits, attitudes and social practices.

The reflection on the society of risk allows the establishment of the complex issue of the relationship between the environment and education, based off of parameters present in social practices centered on education for a sustainable society (JACOBI, GRANJA, FRANCO, 2006, p. 6).

However, the challenge presented to education regarding environmental sustainability in a risk society is that it presents itself as a proposal to modify the behaviors of individuals, while practices which aim for the development of a society with critical consciousness commit to an approach driven towards solving the problematic environment which interrelates social, ecological, economic, political, cultural, scientific, technological and ethical aspects.

## **Environmental Education in Brazil**

In Brazil, environmental education began to develop in the 1970s and 1980s as a diverse, complex and plural field, characterized by the presence of different social actors and sectors, which directly or indirectly influenced its paths. Lima (2008) observed that this realm was composed of different government bodies, UNESCO and the UN, financial institutions, social movements, environmental NGOs and companies connected with financing or the development of educational activities in the environmental field. Evidently, these influences occurred in a manner that was neither homogeneous nor identical in scale. As the author emphasizes, civil society, via social movements and NGOs, through pioneer initiatives from teaching and education institutions engaged in environmental issues demanded the creation of environmental organizations and policies carried out by international organizations. These actions placed pressure on the government and

were especially decisive in the initial period of the creation of environmental education within the country.

Two events demonstrate the process of Brazilian environmental education. The first is the Constitution of 1988, which establishes that the Government must promote environmental education across all levels of the teaching process and throughout public consciousness in order to promote the preservation of the environment. Secondly, the creation of the National Policy of Environmental Education (PNEA) in 1999, which places the individual as a transformative agent that also holds responsibility for the quality and sustainability of life on the planet, not a mere spectator. Within its guidelines, it incorporates social-environmental, cultural and ethical aspects. It further determines that all have the right to environmental education, as an essential and permanent component of national education, establishing that said education must be present in all levels and methods of the education process, both formally and informally. It involves, within its execution, different social actors beyond educational institutions, such as the government, companies, media and civil society (BRASIL, 1999). In 2002, the Decree that regulated the National Policy of Environmental Education highlighted the role of NGOs for this execution (BRASIL, 2002).

Trilla (1985) clarifies that in some works there is a clear distinction between formal and non-formal environmental education. The first refers to environmental education integrated within the formal education system; the latter to extracurricular programs aimed at children, youth and adults. The author observes that the current ecological problems and the growing sensitivity towards them have created a large demand for environmentally-focused education both within and outside of schools. In Brazil, the scale of non-formal environmental education is clarified in PNEA, including educational actions and practices that have the objective of raising society's awareness of environmental themes and encouraging the engagement of individuals into participating in the defense of the environment's quality.

Non-formal environmental education is a process of intentionally organized educational practices, typically dedicated to populations of all ages and that is oriented across several axes, from gaining knowledge to developing positive values and attitudes relating to the environment, including among leisure activities. Proposals in this area are more or less structured via workshops, educational gardens, training courses and others (TRILLA, 1985). Owing to the scope of its performance and the public target, it is a fertile and promising field in promoting consciousness, knowledge, skill development, the establishment of commitments and actions both on the part of individuals and the collective in seeking out the protection and improvement of the environment and the quality of life for both present and future generations (UNESCO/UNEP, 1986).

According to the concept of permanent education (accomplished throughout entire lifetimes), environmental education integrates itself in the education process of each citizen and simultaneously develops alongside other lifelong activities, which is the reason that non-formal environmental education has a fundamental role in furthering responsible citizenship (TRILLA, 1996).

## NGOS: new actors for environmental education demands

The modern world has witnessed a dramatic growth in organized volunteer activities, such as the emergence of non-profit organizations with the goal of meeting the demands of social services, preventing environmental degradation, defending civil rights and seeking to fulfill many other unmet social aspirations that are under the responsibility of the State.

The reach and scale of this phenomenon are large, characterizing a global-associated revolution, which results in the formation of a nonprofit sector, growing due to different pressures, needs and demands of individuals, as citizens, institutions and even of governments themselves, reflecting a set of social changes and the globalization of environmental risks (SALAMON, 1998; FERNANDES, 2005). The term nonprofit sector is a generally adopted name used to distinguish a set of social organizations separate from profit-based business organizations and governmental bodies (CABRAL, 2007, p. 8). Literature on the issue presents several demarcations, which generally identify with the nonprofit sector: non-governmental organizations, charities, social economy, the volunteer sector, the civil society sector and others (FERNANDES, 2005; CABRAL, 2007). The nonprofit sector, however, unites philanthropic institutions that offer services such as health and education, institutions dedicated to defending rights of specific population groups or to those related to environmental protection as well as volunteer work and business philanthropy.

Environmental NGOs are those entities with nonprofit public purposes and with some volunteer participation which participates in social-environmental problems. Its focus of action is to impede environmental degradation and promote sustainable methods of development. In recent decades, many of them have acted together with the community, governments and private initiatives in order to account for the complexity of the environmental field, which demands multi-faceted solutions for a very heterogeneous audience (PIGNATTI, 2005; PRINCEN; FINGER, 1996).

In Brazil, as Fischer (2002) states, the nonprofit sector is ample and diversified, composed of NGOs, private foundations, social assistance entities and charities, religious organizations, and cultural and educational associations, which exhibit performances that are not far off from similar organizations in developed countries. Fischer (2002, p. 45) relates that Brazilian organizations possess varied sizes, degrees of formality, volumes of resources, institutional objectives and methods of performance, and this very diversity is due to the richness and plurality of Brazilian society and of the different historical marks that define the institutional arrangements in the relationship between the state and the market.

Pignatti (2005) reports that the NGOs in Brazil proliferated throughout the 1970s, formed by people belonging to the intellectual elite, originating in universities, churches, parties and militant leftist organizations. In the end of the 1980s and the beginning of the 1990s, due to changes occurring in Brazilian society, the NGOs started to dialogue more closely with the State, participating in actions and legitimizing government programs, as well as acting in several specific fronts, such as environmental NGOs.

Environmental NGOs in Brazil have played an important role in the processing of growth and expansion regarding environmental education actions in the non-formal field,

which complement and oftentimes motivate governmental initiatives and give support to private initiative organizations interested in the development of projects within the area. One of the main characteristics of NGOs is the capacity to unite around shared agendas. Jacobi (2003) observes that a huge leap in the quality of environmental educational activities has been provided by NGOs and community organizations, with the development of an extensive list of non-formal actions, indicative of innovative practices, concerned with developing the co-responsibility of people and social groups regarding the importance of forming citizens that are increasingly more committed to environmental issues.

There are approximately 290.7 thousand not-for-profit private foundations and associations, with 2,242 of these dedicating themselves to activities related to the environment and a significant number developing projects which further environmental education (IBGE, 2012). Research carried out by Editorial Analysis for 2008 (481 entities), 2009 (368 entities) and 2010 (328 entities) indicates a trend on the organizations' behalf of meeting the needs of the environmental education field (95.1%), presenting themselves as agents with know-how for meeting social demands (61.9% of the demands) that reflect the complexity of social-environmental relationships, Table 1. Special note is given to the role of environmental education, which has been leading the focus of organizations' activities since 2008 (92.3%), and the fact that for the majority of the analyzed NGOs (90.9%) the main goal of its activities is stimulating critical awareness, the foundation of which makes up the prescripts of education on sustainability.

**Table 1. Types of activities developed by the organizations**

Type of activity	2008	2009	2010
Environmental Education	92.3%	95.1%	95.1%
Projects with local communities	84.4%	86.1%	84.8%
Environmental conservation projects	82.7%	83.4%	83.5%
Mobilization campaigns	72.1%	75.3%	74.4%
Technical advice and consulting	53.5%	54.9%	61.9%
Sustainable tourism	32.7%	38.0%	36.6%
Research and Development	51.9%	54.6%	55.5%
Recycling	42.9%	42.9%	42.1%
Travel and expeditions	22.3%	26.1%	25.9%
Offering awards	07.5%	09.0%	09.1%
Scientific publications	22.5%	24.2%	25.9%
Varied publications	45.2%	48.4%	48.8%
Public policy	39.6%	49.5%	52.7%
Others	15.8%	22.0%	22.9%

Source: Análise (2008, 2009, 2010)

## The contribution of NGOs towards environmental education: the vision of stakeholders in environmental issues

For research development, the Delphi model is applied, which falls within the so-called prospective method, qualitative in nature and which seeks to obtain consensus of opinion among specialists on the researched theme (ZAZKIEWICZ; SALLES FILHO,

2001). The participation is anonymous, which exempts the participants from social pressure, personality influences and individual dominance, conducive of independent thought and the gradual evolution of opinions as well as low-cost application (GRISI; BRITO, 2003; GIOVINAZZO, 2001; VERGARA, 2004).

The identification of expert opinion, named the Delphi panel, bases itself on the application of a questionnaire, given in successive rounds (the literature suggests between two and ten). The questionnaires present a series of propositions, specific to stakeholders that must then individually classify them, according to established criteria and in order of thematic relevance. The answers to these questionnaires are then summarized, tabulated and returned to the experts in order to revalidate or reformulate their opinions (GIOVINAZZO, 2001; VERGARA, 2004). The objective is to distribute all the available information generated by the group among all participants (WOUNDENBER, 1991).

Each round, the questionnaires are submitted to statistical treatment, with relevant questions being included and those considered to hold low importance to the study being eliminated. In other words, if there is a high discrepancy in relation to the opinion of a specific expert, it will not be possible to arrive at a consensus, causing the necessity for exclusion. As questions are introduced and excluded in each round, the expert is allowed to change his or her evaluation given to a specific question from the previous round, to establish a new degree of relevance for this question in the subsequent phase (VERGARA, 2004).

Five groups of specialists with relevant expertise in the research's specific theme were chosen for the research, with five representatives in each group, totaling 25 participants. The specialists were chosen taking into account the concept of stakeholder proposed by Freeman (1984), "any group or individual who can affect or is affected by the achievement of the organization's objectives." The number of selected participants guarantees the continuity of the work, even if some participants had withdrawn. No withdrawal occurred, meaning that the group was effectively composed of 25 participants: five business managers that developed partnerships with environmental NGOs; five public administrators that developed projects with environmental NGOs; five managers of environmental NGOs; five journalists that participated in the theme of the environment and five university professors that also worked with environmental NGOs. These specialists remained anonymous, as required by the method.

Regarding the chosen specialists, Adams (1980) observes that they must feel personally involved with the issue, possessing information and experience related to the process and therefore motivated to participate, understanding that the results provide important information. Giovinazzo (2000) highlights that the specialists should be selected from different sectors and organizations, such as universities, institutions and industries. Quality results depend mainly on the chosen specialists.

### **Accomplishing Delphi research**

The Delphi research was developed in three stages. Initially, a semi-structured interview was given to the participants for raising the main questions and possible responses. One of the characteristics of this interview is the utilization of a previously described



script elaborated with basic questions supported in theories and hypotheses related to the investigated theme (TRIVINOS, 1987; MANZINI, 2003).

During the first contact, the participants were thoroughly briefed on the researched theme and committed themselves to the following steps. The commitment of the participating specialists is indispensable in carrying out the research (CARTER; BEAULIEU, 1992). The interviews discussed the characteristics of non-formal environmental education processes, the profile of the target demographic of NGO activity, possibilities of NGOs developing projects in partnership with other entities (public, private or non-profit sector), profile traits of environmental education and its professionalization, sources of financing activities and charging for services on the parts of the organizations.

After the initial interviews, a questionnaire was developed, discussing possible responses which should be given a grade between zero and ten, with zero representing total disagreement and ten representing total agreement. The questionnaires were sent via internet for the second round of questions. Table 2 shows the formulated questions and the statistical analysis of the grades from the second round of questionnaires.

**Table 2. Second round of Delphi research**

Questions (EE - Environmental Education)	Statistical parameters			
	Average	Median	Mode	Standard Deviation
The EE developed by NGOs should be:				
1. Informative	8.0	10.0	10.0	2.6
2. Propositional	8.6	10.0	10.0	2.8
3. Critical	8.2	10.0	10.0	3.2
EE developed by NGOs should be directed at:				
1. Schools	9.4	10.0	10.0	1.3
2. Businesses	8.1	10.0	10.0	2.8
3. Public Organizations	8.0	10.0	10.0	2.7
4. Needy communities	8.8	10.0	10.0	2.1
5. Communities exposed to environmental risks	9.2	10.0	10.0	2.1
NGOs should develop their activities:				
1. In partnership with other NGOs	9.0	10.0	10.0	1.6
2. In partnership with public organizations	8.2	9.0	10.0	2.5
3. In partnership with private businesses	8.0	9.0	10.0	2.8
4. Independently	5.9	8.0	10.0	4.0
NGO environmental educators should:				
1. Work as volunteers	4.2	5.0	0.0	3.5
2. Be remunerated for their work	8.4	10.0	10.0	2.6
Environmental educators should have:				
1. Academic education	7.5	8.0	10.0	2.2
2. Experience as a teacher	5.1	5.0	5.0	3.1
3. Professional experience in the environmental area	7.3	8.0	5.0	2.5
4. Professional experience in related areas	6.8	7.5	8.0	2.5
5. Interpersonal relationship skills	8.8	10.0	10.0	1.7
6. Concern for environmental issues	9.8	10.0	10.0	0.5
7. Militancy in environmental movements	4.9	5.0	5.0	2.7
Environmental NGOs should be financed by:				
1. Public funds	7.6	8.0	10.0	2.6
2. Private funds (businesses)	7.8	8.5	10.0	2.4
3. Charging for services	7.0	7.5	10.0	3.4
4. Donations	8.0	8.0	10.0	2.0

Source: developed by the authors

It was possible to identify the existence of large data points of agreement regarding the type of non-formal environmental education which should be developed by NGOs among the stakeholders during the second round. It is a large conception which envelops not only the informative and propositional aspects, but also critical aspects. Guimarães (2006, p. 12) observes that knowledge directed towards preservation remains important, but focusing only on this is insufficient in causing significant changes in the social-environmental reality.

Research carried out by Editorial Analysis, between 2008 and 2010 regarding the profile of NGOs demonstrates that stimulating critical awareness was the main focus of the developed activities during this period. Table 3 presents other objectives and their activities identified in the research (ANÁLISE, 2008; ANÁLISE, 2009; ANÁLISE, 2010).

**Table 3. Goals of programs developed by NGOs**

Goal	2008	2009	2010
Stimulate critical awareness	89.4%	91.0%	90.9%
Transform their actions into public policy	76.5%	81.3%	82.9%
Strengthen other environmental organizations	55.2%	57.6%	59.8%
Solve immediate problems	57.5%	59.5%	57.3%
Bar the development of non-sustainable markets	51.5%	54.9%	53.4%
Others	24.4%	30.4%	31.1%

Source: Análise (2008, 2009, 2010).

Another point of agreement that was identified among the specialists in the second round is the amplitude of the target demographic in educational actions. They expect that environmental education practices direct themselves to more diverse segments of society. In this way, according to Gadotti (2005), the non-formal education programs, due to their flexible nature, both due to time and multiple locales as well as not being obligated to follow a sequential and hierarchic system of progression, allow them to reach a more heterogeneous target demographic.

On the other hand, it is possible to observe disagreement among specialists regarding remuneration of environmental education. Some of those interviewed believe that environmental education work should be volunteer in nature, while others emphasize the importance of educator remuneration, encouraging its professionalization. It should be noted that volunteer work may be interrupted, and even if it is not, the possibility of educators without appropriate methodology remains.

A second point of contention refers to the method of financing these activities, with some interviewees disagreeing with public funds and others with private funds. This concern is based on the possibility of interference from the financier of the developed project. However, there is large agreement in the belief that environmental education be offered freely by NGOs, given its importance in society. It should be noted that in Brazil the National Policy of Environmental Education determines that the Government encourages all levels of government administration to participate on a large scale with NGOs in the formulation and execution of programs and activities linked to non-formal environmental education.

With the goal of reaching if not a full consensus then at least an evaluation with large support among the stakeholders, all of the alternatives which received an average of lower than seven were eliminated from the questionnaire.

Table 4 presents the questions and the statistical analysis of the grades given in the third round of the Delphi research.

**Table 4. Third round of Delphi research**

Questions	Statistical parameters			
	Average	Median	Mode	Standard Deviation
1. Environmental education developed by NGOs should be as broad as possible, covering the informative, propositional and critical aspects.	9.5	10.0	10.0	1.2
2. Environmental education developed by NGOs should be directed to all segments of society.	8.9	10.0	10.0	2.3
3. NGOs should develop their activities in partnership with other NGOs and organizations in the public and private sectors.	8.4	9.0	10.0	2.0
4. Environmental educators from NGOs should be paid, seeking its professionalization.	8.9	10.0	10.0	1.8
5. The environmental educator should have academic background, professional experience and concern for environmental issues, with the main requirement being interpersonal skills.	7.7	8.0	10.0	2.0
6. Environmental NGOs should seek resources in the various sectors of the economy (public, private donations and society) in order to offer their services for free to society	8.0	8.0	10.0	1.7

Source: developed by the authors.

With the final result of the research, it is possible to observe that according to the vision of the consulted upon stakeholders non-formal environmental education developed by NGOs should be as wide as possible, addressing the informative aspects, propositions and critics and extending to all segments of society. Guimarães (2004) highlights two axes in the field of environmental education. The first is the traditional or conservative style, which according to the author is characterized by being hegemonic and presenting a scientific view, simplifying the complex phenomenons of reality, therefore with the potential to push forward the necessary changes for overcoming the current environmental crisis. The second axis, classified as critical environmental education, is conceptualized by the author as contra-hegemony, with an interdisciplinary profile relating to the theory of complexity, with the goal of revealing the dominating relationships that mold current society. This perspective, in the author's view, must be a counterpoint to the processes identified with conservative education. The traditional approach to education is contested by the process of solving environmental problems, complex in nature, which impedes them from fitting within the limits of a specific discipline, due to its interdisciplinary nature.

Note that the strength of non-formal environmental education lies in the fact that it does not operate within a specific set of rules with rigid structures and curriculum or formal evaluations. Generally, non-formal education supplies a number of functions related

to permanent education and other dimensions of the education process as a whole, which are not met by formal education. There is a concentration of non-formal educative actions among certain types of education, such as environmental education (LA BELLE, 1980; BLOOM, 1956, 1976). This flexible approach to non-formal environmental education allows NGOs to work with a large diversity of issues, meeting the demands guided by the specific objectives of various projects as well as the respective target demographics (UNESCO/UNEP, 1986).

The organizational singularity of NGOs provides them with a malleability allowing to meet the demands of different audiences, working with a large diversity of themes and objectives, which can be increased based on new demands. According to Salamon (1998), historical changes create the possibility for alternative institutions to more adequately meet the needs of social demands, such as in the non-formal environmental education process. For the author, these organizations are more able to meet these needs due to small scale, flexibility and the capacity to mobilize popular participation.

Another conclusion obtained in this research is that specialists expect that NGOs develop their activities in partnership with other NGOs and organizations from both the private and public sectors. Note that the National Policy of Environmental Education in Brazil itself establishes that the Government should stimulate participation among public and private companies in the development of environmental education programs in partnership with schools, universities and NGOs.

These organizations, with the diverse identities characterizing them, acquire experience and legitimacy in order to establish new methods of cooperation and partnership with the public and private sectors, enabling the expansion of citizenship through their actions. Jacobi (2003, p. 3) observes that the growth in number and size of NGOs via the increase in visibility and legitimacy allows for uniting existing networks and forming new organization dynamics in order to exchange information, share the workload and increase the reach of the initiatives.

The civil society organizations have obtained a larger institutional consistency and new organizational skills, beginning to be seen as legitimate institutions for the establishment of partnerships between the State and companies willing to develop some type of social initiative. In this manner, these entities start to have a more elevated status and should have strong skills in administration and management in order to perform their role in reaching results that inspire partnership (FISCHER, 2002, p. 36).

Joint actions between civil society organizations and private sector organizations is not recent, and emerged starting in the end of the 90s, as one of the strongest strategies available to promote sustainable development (FISHER, 2002, p. 29). The continual process of the reduction of actions held by the State has also contributed in the emergence of these partnerships.

Garrison (2000) posits that there is a consensus in what gaps NGOs can efficiently occupy left by the State, motivated by private concerns (albeit with the task of carrying out the public interest) and based on knowledge networks and internal standards of efficiency and effectiveness. These entities neither generate nor distribute profit, but move and transfer reasonable volumes of finances and become increasingly professionalized.

More so than the State, they acquire experience and legitimacy in establishing different methods of cooperation and partnership in holding actions in the environmental sector (GADOTTI, 2000).

It is also possible to observe that the consulted stakeholders also understand that environmental NGOs should look for resources both in the public and private sector, such as donations from society, in order to offer services free of charge. On the other hand, the proposal of volunteers as a base for NGO activities is not predominant among the specialists. On the contrary, several participants propose that it is necessary to offer remuneration to environmental educators from NGOs, seeking professionalization through academic education, professional experience and interpersonal relationship skills. Beyond knowledge of aspects related to the environment, the environmental educator should know the needs of the community and have skills for developing teamwork, in order to find participative solutions to the problems that present themselves. For this reason, the profile of professional environmental educator, either in the non-formal or formal area, requires extended training that goes beyond university, demanding interdisciplinary experience, creativity to deal with construction in the area, a systemic view, and a reflective and participatory stance that mobilizes society. As Zahler (2007) observes, beyond the issue of preserving natural resources, the environmental educator should understand the dynamics of nature, the necessity of communities and also have skills to develop teamwork, seeking a participative solution to presented problems.

The environmental educator is a professional with a profile that is still taking shape. They offer diverse professional contexts, bringing a large variety of skills and knowledge for the organizations they work with. However, as highlighted by Lerda and Earle (2007), this diversity in the professional field confirms the myth that anyone can be an environmental educator, since anyone working with communities, education, development projects or research in some manner works as an educator presenting new ideas and proposals for his or her target audience.

Moreover, as the authors indicate, professional titles or job descriptions of professionals working with communities do not always recognize the educational element. This fact, as the authors warn, can facilitate the absence of more technical training, didactic tools and integration with components of the environmental education processes.

## Final Considerations

The perception and awareness of the serious problems affecting modern society, especially universal and global ecological risks, is undoubtedly an issue that concerns the survival of human beings on earth and needs to be addressed. The complexity of the elements that shape this context is fundamental in environmental education. Its challenge is to make society aware of the social and environmental risks it generates, allowing behavioral changes in relationship with nature.

In the field of environmental issues, the problems and solutions, as well as the costs and benefits, involve different actors and require coordination between the public, private and civil society sector, through their various organizations. It is a reality that demands a

new educational scenario in which NGOs present themselves as key players for their expertise and profile for the development of non-formal environmental education processes.

The end result of the research Delphi offers a view of the prevailing opinion among the participants about the expectations of society on the role to be played by NGOs in relation to environmental education practices.

It is expected that these institutions maintain a broad environmental education, covering aspects that are not only informative and purposeful, but also critical and addressed to all segments of society, working in partnership with other NGOs and organizations in the public and private sectors, supported by paid professional educators, with strong personal skills that go beyond an academic background and professional experience, with great interpersonal capacity.

This study did not intend to fully examine the discussion on the topic. Rather, the results suggest a list of questions, and cause the entrance into new fields of research. What are the limits of environmental education regarding sustainable development? What is the effectiveness of non-formal environmental education on the diversity of groups and their demands? How is it possible to solve problems related to lack of funding and structure for the development of educational programs? How should environmental education interact with other educational aspects such as education for peace, human rights, intercultural education, international development and communication?

In this manner, we can also highlight the increasing challenges faced when setting up NGO partnerships with other organizations, such as reshaping traditional functions, new internal organizational processes, legal adequacy, improvements in training human resources and institutional management, achieving efficiency and effectiveness, transparency, better evaluation, quality results and also recognition and legitimacy within civil society. Also note that there are defined limits important to the success of the actions of NGOs, such as the heterogeneity of organizations and issues such as the funding of their services as well as their ability to obtain and measure positive results of the projects, as in the generation of new social behaviors.

These are merely some of the questions relevant to the topic, which remains a wide open field for theoretical and empirical studies.

## References

- ADAMS, L. A. Delphi Forecasting: Future Issues. **Grievance Arbitration. Technological Forecasting and Social Change**. New York, v. 12, n. 2, 1980.
- ANÁLISE, **Gestão Ambiental Anuário 2008**. São Paulo: Análise editorial, 2008.
- ANÁLISE, **Gestão Ambiental Anuário 2009**. São Paulo: Análise editorial, 2009.
- ANÁLISE, **Gestão Ambiental Anuário 2010**. São Paulo: Análise editorial, 2010.
- BECK, U. **Risk Society: towards a new modernity**. London: Sage, 1992.
- BLOOM, B. S. **Taxonomy of Educational Objectives: The Classification of Educational Goals. Handbook 1: Cognitive Domain**. New York: Mc KAY, 1956.

BRASIL. Decreto nº 4.281, de 25 de junho de 2002. Regulamenta a Lei nº 9.795, de 27 de abril de 1999, que institui a Política Nacional de Educação Ambiental, e dá outras providências.

BRASIL. Lei nº 9.795, de 27 de abril de 1999. Dispõe sobre a Educação Ambiental, institui a Política Nacional de Educação Ambiental e dá outras providências. DOFC PUB 28/04/1999.

CABRAL, E. de S. **Terceiro setor. Gestão e controle social.** São Paulo: Saraiva, 2007.

CAPRA F. **O ponto de mutação: a ciência, a sociedade e a cultura emergente.** São Paulo: Cultrix; 1988.

CARTER, K. A.; BEAULIEU, L. J. **Conduction a Community Needs Assessment: Primary Data Collection Techniques.** Florida: Cooperative Extension Service, 1992

COLLEY, H.; HODKINSON, P; MALCOLM, J. **Non-formal learning: mapping the conceptual terrain, a consultation report.** Leeds: Lifelong Learning Institute. University of Leeds, 2002.

DELORS J. (org). Educação: um tesouro a descobrir. **Relatório para a UNESCO da Comissão Internacional sobre Educação para o século XXI.** 4 ed. São Paulo: Cortez, 2000.

FERNANDES, R. C. O que é o terceiro setor? In: IOSCHPE, E. et al. **3º Setor. Desenvolvimento Social Sustentado.** Rio de Janeiro: Paz e Terra, 2005.

FREEMAN, R. E. **Strategic management: a stakeholder approach.** Boston: Pitman/Ballinger, 1984.

GADOTTI, M. **A Questão da Educação Formal/Não formal.** Institut International Des Droits de L'Enfant (IDE). Droit à L'Education: solution à tous lês problêmes ou problême sans solution? Sion (Suisse), 18 au 22 octobre 2005.

GIDDENS, A. **As consequências da modernidade.** Trad. Raul Fiker. São Paulo: Editora Unesp, 1991.

GIOVINAZZO, R. A. Modelo de aplicação da metodologia Delphi pela internet □ vantagens e ressalvas. **Administração On line**, v. 2, n. 2, abril/maio/jun, 2001.

GRISI, C. C. de H. e; BRITO, R. de . Técnica de cenários e o método Delphi: uma aplicação para o ambiente brasileiro. **Seminários em Administração FEA-USP**, São Paulo, 2003.

GUIMARÃES, M. A formação de educadores ambientais. **Coleção Papyrus Educação.** Campinas, SP: Papyrus, 2004.

IBGE - Instituto Brasileiro de Geografia e Estatística e Instituto de Pesquisa Econômica Aplicada. **As Fundações Privadas e Associações sem Fins Lucrativos no Brasil 2010.** Rio de Janeiro: IBGE, 2012.

JACOBI, P. R. Educação Ambiental: o desafio da construção de um pensamento crítico, complexo, e reflexivo. **Educação e Pesquisa.** São Paulo, v. 31, nº 2, pp. 233-250, maio-ago, 2005.

- JACOBI, P. R. Movimento ambientalista no Brasil. Representação social e complexidade da articulação de práticas coletivas. In: Ribeiro, W. (org.) **Patrimônio Ambiental**, EDUSP, 2003.
- JACOBI, P. R.; GRANJA S. I. B.; FRANCO, M. I. Aprendizagem social: práticas educativas e participação da sociedade civil como estratégias de aprimoramento para a gestão compartilhada em bacias hidrográficas. **São Paulo em Perspectiva**. São Paulo, Fundação Seade, v. 20, nº 2, pp. 5-18, abr.-jun. 2006. Disponível em: <<http://www.seade.gov.br; www.scielo.br>>. Acesso em: 10 jan. 2014.
- LA BELLE, T. J. **Educación no formal y cambio social en América Latina**, México: Nueva Imagen, 1980.
- LENZI, C. L. L. **Modernização Reflexiva: Política, Tradição e Estética na Ordem Social Moderna**. Trad. Magda Lopes. São Paulo: Editora da Universidade Estadual Paulista, 1997.
- LERDA, D.; EARLE, S. W. Educação ambiental para a conservação □ desafios e lições. In: JUNQUEIRA, V; NEIMAN, Z. **Educação ambiental e conservação da biodiversidade**. São Paulo: Manole, 2007.
- LIMA, G.F.C. Critical environmental education: from socioenvironmentalism to sustainable societies. **Educação e Pesquisa**, São Paulo, v.35, n.1, p. 145-163, jan./abr. 2009.
- MANZINI, E. J. Considerações sobre a elaboração de roteiro para entrevista semi-estruturada. In: MARQUEZINE, M. C.; ALMEIDA, M. A.; OMOTE, S. (Orgs.) **Colóquios sobre pesquisa em Educação Especial**. Londrina: Eduel, 2003. p.11-25.
- MORIN, E. **A cabeça bem feita: repensar a reforma, reformar o pensamento**. Rio de Janeiro: Bertrand Brasil, 2000.
- MORIN, E. **O paradigma perdido: a natureza humana**. 6. ed. Lisboa: Europa-América, 1999.
- PIGNATTI, M. G. **As ONGs e a política ambiental nos anos 90. Um olhar sobre Mato Grosso**. São Paulo: Annablume; Universidade Federal de Mato Grosso; Instituto da Saúde Coletiva, 2005.
- PRICEN, T.; FINGER, M. **Environmental NGOs in world politics**. London: Routledge, 1996.
- SALAMON, L. A emergência do terceiro setor □ uma revolução associativa global. **Revista de Administração**. São Paulo, v. 33, nº 1, pp. 5-11, jan.-mar., 1998.
- TRILLA, J. **La educación fuera de la escuela: enseñanza a distancia, por correspondência, por ordenador, rádio, vídeo y otros médios no formales**. Barcelona: Planeta, 1985.
- TRILLA, J. **La Educación Fuera de la Escuela. Ámbitos no formales de educación social**. Barcelona: Ariel, 1996.
- TRIVIÑOS, A. N. S. Introdução à pesquisa em ciências sociais: a pesquisa qualitativa em educação. São Paulo: Atlas, 1987.



UNESCO/UNEP. **A Guide on Environmental Values**. Education. IEEP Environmental Education Series, v. 13, 1985.

VERGARA, S. C. **Projetos e relatórios de pesquisa em administração**. São Paulo: Atlas, 2004.

WOUNDENBERG, F. **An Evaluation of Delphi. Technological Forecasting and Social Change**. New York, v. 40, n2, 1991.

ZACHIEWICZ, M.; SALLES FILHO, S. Technological foresight: um instrumento para política científica e tecnológica. **Parcerias Estratégicas**, n° 10, mar. 2001.

ZHALER, P. J. M. O perfil do educador ambiental. Disponível em: <<http://www.grupo-currupiao.blogspot.com>>. Acesso em: 13 jan 2014.

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# THE CONTRIBUTION OF NGOS IN ENVIRONMENTAL EDUCATION: AN EVALUATION OF STAKEHOLDERS' PERCEPTION

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**Abstract:** Environmental education practiced by non-governmental organizations (NGOs) presents itself as a new teaching method directed at changing habits, attitudes and social practices seeking solutions for the social-environmental degradation afflicting the contemporary world. This work seeks to identify the perception and expectations of stakeholders regarding the contribution of NGOs in environmental education. The research was guided by the Delphi method and, as a result, verified that the involved stakeholders understand that environmental education practiced by NGOs must be ample, free, professionalized and directed towards all the segments of society via partnerships with public and private sector organizations.

**Keywords:** Environmental Education, Non-governmental Organizations, Delphi Method, Stakeholders.

**Resumo:** A educação ambiental praticada pelas organizações não governamentais (ONGs) apresenta-se como uma nova proposta pedagógica voltada para a mudança de hábitos, atitudes e práticas sociais na busca de soluções para a degradação socioambiental que aflige o mundo contemporâneo. Este trabalho procura identificar a percepção e as expectativas dos stakeholders quanto à contribuição das ONGs para a educação ambiental. A pesquisa foi orientada pelo método Delphi e como resultado verificou-se que os stakeholders envolvidos entendem que a educação ambiental praticada pelas ONGs deve ser ampla, gratuita, profissionalizada e dirigida a todos os segmentos da sociedade por meio de parcerias com organizações dos setores público e privado.

**Palavras chave:** Educação Ambiental, Organizações Não Governamentais, Método Delphi, Stakeholders.

**Resumen:** La educación ambiental practicada por las organizaciones no gubernamentales (ONG) se presenta como una nueva propuesta pedagógica orientada a cambiar los hábitos, actitudes y prácticas sociales en la búsqueda de soluciones a la degradación social y ambiental que aquejan al mundo contemporáneo. Este trabajo intenta identificar las percepciones y

expectativas de los interesados con respecto a la contribución de las ONG para la educación ambiental. La investigación se basó en el método Delphi y como resultado se encontró que los actores involucrados entienden que la educación ambiental desarrollada por las ONG debe ser amplia, libre, profesionalizada y dirigida a todos los segmentos de la sociedad a través de asociaciones con organizaciones de los sectores público y privado.

**Palabras clave:** Educación Ambiental, Organizaciones No Gubernamentales, Método Delphi, Partes Interesadas.

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