

Challenges of searching for a systematic awareness in a 21st century school

The experience of the National School in Brazil

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“Affirm faith in the inherent dignity of all human beings and in the intellectual, artistic, ethical, and spiritual potential of humanity.”

Earth Charter

Introduction

The National School of Primary and Secondary Studies (Colégio Nacional de 1º e 2º Graus) is a private educational institution that will celebrate its 30th anniversary in 2015. As a young institution, it endeavors to confront the largest challenges that humanity has faced in recent times. It is situated in the Southeastern region of Brazil, in the state of Minas Gerais, which is an affluent and prosperous region compared to the other regions of the country's interior.



The institution possesses four teaching facilities in the cities of

Uberlândia, Araguari, Ituiutaba (MG – Minas Gerais), and Catalão (GO - Goiás), which organize themselves within the following educational levels: Early Childhood Education, Elementary Education (cycles I and II) and Secondary Education, comprising the so-called “Basic Education” and Preparatory Courses, focused on the development of skills and competencies of students who will compete within the selective processes of the various Brazilian universities.

Throughout its existence, the institution has learned to educate children and adolescents as citizens concerned about social realities, and has realized that its educational purpose is centered on the formation of participatory individuals, capable of valuing diverse forms of existence and thought, assessing social conditions, promoting their participation in community issues, assuming a social role, and acting ethically, autonomously and creatively. Therefore, all pedagogical practices aim for citizenship and are committed to broader social interests.

The National School (Colégio Nacional) supports social and educational projects, some of them carried out by non-profit institutions. In this sense, more than simply contributing, it learns to live through constant reflection and promote the reconstruction of same practices.

Never before has there been so much discussion about the importance and urgency of the conscious use of natural resources. In addition to inserting the topic in a transversal manner, through interdisciplinary and action-oriented projects, the institution contributes toward broadening the scope of this discussion by direct community intervention, educational campaigns, and supporting causes engaged in contributing to the appreciation of integrated ways of life that work with, rather than against, nature, and are for the diversity, stability, and sustainability of natural ecosystems, rather than their exploitation.

The actions of the National School (Colégio Nacional) are guided by the Earth Charter. As a result of this institutional perspective, during its second Strategic Management Seminar in 2010, it defined its higher purpose as being: “Our cause, our life – To promote the common good through education, with a commitment to better care for the self, for the other, for this place, and to value respect for diversity, sustainable development, creative stimulation, and the never ending search for innovation, referenced in our history and in scientific and technological advancement”.

Implementation

“There is a Way (Tem Jeito Sim)”

This is the name given to the educational programme that defines the curricular guidelines and educational policy established for all branches of the National School (Colégio Nacional). Its objective is the formation of historic individuals⁹, both morally and intellectually autonomous, who act in a critical, participatory, and citizen-like manner in society. Its challenges are to bring educators to comprehend, reflect, and become aware that the manner in which childhood, adolescence, youth, and adulthood are lived is changing; the certainty of the need for a new attitude toward the acquisition of knowledge; clarity of the intertemporal dimension that exists in the childhood and youth phases of the lifecycle; and, primarily, commitment to education and human development through processes for the attainment of wisdom, knowledge, symbolic systems, sciences, arts, memory, identity, values, and cultures.

Based on the ever-growing awareness of the importance of understanding the Human-Nature relationship, and underpinned by the principles of the Earth Charter, the “There is a Way (Tem Jeito Sim)” programme, subdivided into four sub-projects, will be carried out alongside the entire Basic School system - the projects: “Me (Eu)” for early childhood education; “Me In (Eu Em)” for Elementary Education cycle I, “Me With (Eu Com)” for Elementary Education cycle II and “Me For (Eu Para)” focused on Secondary Education.

For analysis within this article, the pedagogical staff and faculty have selected the behaviors developed within the “Me With (Eu Com)” project – Elementary Education cycle II, as it pertains to the promotion of a sense of belonging among students as its highest principle. Through this project, the “There is a Way (Tem Jeito Sim)” programme aims for the formation of social individuals, promoting the recommendation of interventions necessary for the improvement of the quality of life of individuals enrolled in the school. The formation of this planetary citizen, who sees himself/herself as a constituent part of nature, and thus fulfills a fundamental role in the conservation and preservation of his/her environment, is the foremost objective of the educational programme, committed to the cycle of human life. It is important to understand that skills and abilities are developed within the framework of lived experiences, and that the space for interaction and social relations provided by the school is fundamental for the development of rational intelligence, and offers an educational space that promotes the belonging and interaction necessary for the development of both the moral and intellectual autonomy of students, in addition to awareness of social, psychosocial, linguistic, and ethical dimensions.

The “There is a Way (Tem Jeito Sim)” programme faces the challenge of constructing an interdisciplinary approach that breaks away from the fragmentation of knowledge from diverse disciplines and proposes integration of disciplines as a whole, as well as within individual disciplines. This establishment of intercommunication between disciplines favors a horizontal and vertical analysis of the learning content, providing students with gradual, procedural, and systematic acquisition of concepts and phenomena.

⁹ Historic individuals are those who respect their origin, their own history which includes their family history, their community and their country. Individuals that respect themselves and their values will be in turn more respectful and patient with others, with their culture and values. It is impossible to know about the history of others without knowing our own history. We understand that this has been the root for many conflicts. Therefore when one respect oneself it is easier to understand the other.

By seeking a space to facilitate implementation of this vision within the school, the “There is a Way (Tem Jeito Sim)” programme, through the “Me with (Eu Com)” project, was able to incorporate the emergence of science and citizenship as disciplines of a diversified curricular foundation.

The discipline of Science and Citizenship (the transversal axis of the programme) aims to guarantee spaces of coexistence that ensure meaningful learning, understandings of social, political, and economic contexts by students, and the experience of a dialogical and investigative methodology for teachers, students, and other educational agents within the school.



The difficulties to implement this discipline are centered in two significant aspects:

- 1) The teacher training has lead teachers to perceive that the main purpose of their work is to transfer information;
- 2) And from the student’s perspective they see the education experience solely as a tool to pass exams.

Breaking from this logic creates a desire that instigates the search for knowledge creation and forms a cohesive body of educators and learners who enable the construction of collective thinking. In addition, it demonstrates the social function of the school and its responsibility with the collective, and most importantly gives meaning to the learning content by transforming the school space into a space for creation, curiosity, and investigation.

Without understanding that the human race is made up of individuals who differ in their opinions, experiences, and attitudes, and without respect for these differences, including beliefs, customs, and cultures, there is no way of working toward a more egalitarian society and even less hope of working collectively. Therefore, the “There is a Way (Tem Jeito Sim)” programme, through the “Me With (Eu Com)” project and the discipline of “Science and Citizenship (Ciência e Cidadania)”, aims to develop the autonomy of individuals involved in the creation of knowledge, thus strengthening teacher-student relationships that form a partnership within this framework.

The Discipline ‘Science and Citizenship’

The main characteristic of this discipline is to place students in a role as subjects of their own learning. Using the problems that arise in the world and within social relations, students are able to propose solutions, point to alternatives, comprehend limitations, and especially adopt an attitude of citizenship and collective responsibility.

The globalizing activities developed within this discipline allow for an interconnection between the diverse realms of knowledge, permeating themes and allowing the knowledge contributed by students to also be considered. Dialogue and unstructured sharing of opinions and ideas are promoted in this discipline, because to learn it is important that students feel free to share their thoughts, without judgments. This sharing contributes toward both a collective and individual analysis of a specific situation, and advances a partial systematization, and final synthesis or conclusion about the research findings about a specific problem and possible solutions.

The topics of study, as suggested by teachers and students, generate common threads that help to bring together the findings from different sciences, with the purpose of responding to current demands and problem situations and/or the necessity and curiosity of students and teachers.

For the implementation of this work, a group of educators was formed in 2014. These are Science and Citizenship teachers within the four educational units that, along with their Pedagogical Coordinators, create space for reading, reflection, deepening of knowledge, and proposals for action.

Employing the principles of the Earth Charter, creating a didactic process that utilizes a dialogical and investigative methodology, as well as educational and technological resources that facilitate research, educators favor the development of the child-youth protagonist role and the introduction of ideas that incorporate the following into the daily school routine: observation, attention, debate, and action toward the construction of a socio-ecological attitude; raising awareness among the educational community toward the reflection of how the school ecosystem interacts with its location and with Planet Earth; development of educational projects based on the principles and values of the Earth Charter; specification of guidelines that may be utilized within instructional materials determined by the students themselves and/or the school community.

Based on the concepts extracted from the book “Ecological Literacy (Alfabetização Ecológica)” and the Earth Charter, the educators of the National School (Colégio Nacional) developed a work proposal that takes into consideration the study and observation of the educational space, through a web of human relations. These educators regard the concept of place, constructed throughout human history and the geological past, to be a premise for this framework. They understand that an ecosystem not only possesses a variety of microsystems across its landscape (particularly flora and fauna), but also inhabitants (with a social, economic, and political order), and that together these form networks of systemic and auto-dependent relations.

Instructional Sequence Developed by the Discipline in 2014

1. The objective of the Science and Citizen (Ciência e Cidadania) discipline within Elementary Education cycle II is to:
Use the Earth Charter as a resource for teaching and learning with the purpose of:
 - Incorporating observation, attention, debate, and action toward the construction of a socio-ecological attitude into the daily school routine.
 - Raising awareness with the educational community about how the school ecosystem interacts with its location and with Planet Earth.
 - Developing educational projects based on the principles and values of the Earth Charter.
 - Specifying guidelines that may be utilized within instructional materials determined by the students themselves and/or the school community.

2. Synthesis Framework

INSTRUCTIONAL SEQUENCE	
1.	Presentation: of the teacher, students, objectives of the discipline, development of an agenda.
2.	Individual work: reading the comic strip: "Monica's Crew - Caring for the World (Turma da Mônica - Cuidando do Mundo)".
3.	Group work: Discussion about the text: "What does it Mean to Take Care of the World? (O que Significa Cuidar do Mundo?)" How would you take care of something so big? Where would you begin?
4.	Classroom Group: Impressions of the text among the groups. Electing a presenter and a note-keeper.
5.	Discussion Circle: Topic: Looking toward our school, what alterations would be necessary for us to contribute to the improvement of the planet?
6.	Video Presentation: "The Power of Ten - From Micro to Macro (Potência de Dez - Do Micro ao Macrocósmo)"
7.	Reflection: What elements of the film resonated with you? What feelings did it trigger? Who are we within this greater immensity? Within our physical space (the school) are we contributing to the improvement of the planet?

8.	Group work: Construction of two lists: What is not being done well and should be changed within our school? What is very good about our school and must be continued?
9.	Interaction of groups: Choose two students to present the work of each group. Those who worked on the list of negative points within their group should present the list of positive points and vice-versa, in order to promote a balance of energies.
10.	Systematization by the teacher: Reading of the group lists, discussion about any significant aspects and numbering of items.
11.	Starting the project: The teacher should direct the organization of the items in a manner that guarantees that each year of the cycle is assigned one issue to be resolved (topic to be researched by the students).
12.	Problematization: Based on the selected topic, the teacher should elaborate the problematization(s) of the project for the students. Each group should research the various aspects of the same topic.
13.	Specification of the Project - Justification: Assist groups to identify a justification for the project (they don't know yet how to systematize). They should talk about why they chose this topic and this problematization, and record their impressions. These texts should undergo editing and linguistic analysis. Teachers of the Portuguese language may assist with this task.
14.	Specification of the Project - Objectives: Assist the various groups in defining their objectives. The objectives should be clear, precise and observable, since we are dealing with procedural content and seeking a differentiated attitude.
15.	Specification of the Project - Goals: The teacher should inform students that actions need to be developed within a specific amount of time, and thus a small amount continuously is preferable to a large amount intermittently.
16.	Specification of the Project - Actions: The teacher should assist and accompany the actions of students. Often, the viability of the project depends on the structure of the school and/or of the subjects involved (Managers, Pedagogical Coordinators, other teachers, Coordinator of Institutional Projects, etc.).
17.	Specification of the Project - Evaluation: The progress of the project should constantly be evaluated by teachers and students
18.	Final Product: All of the work done by the students should be recorded in a journal that will be distributed to the other students at the National Forum for Citizen Action (FNAC – Fórum Nacional de Ação Cidadã).

3. Materials to be used in the classroom:

- Copies of the comic strip "Monica's Crew - Caring for the World (Turma da Mônica - Cuidando do Mundo)"
- Book "Ecological Literacy (Alfabetização Ecológica)" by Fritjof Capra, for deeper context
- Youtube - film: "The Power of Ten (Potência de Dez)"
- Sulfite paper
- Masking tape
- Construction paper
- Scissors



Lessons learned

The space for study, deepening of knowledge, reflection, and proposal of ideas has promoted greater understanding among teachers, Pedagogical Coordinators, and Advisors, contributing to the exchange of knowledge and the promotion of values such as respect, esteem, and consideration. The relational competence of teachers and students that is highly necessary for the development of both intra- and interpersonal intelligence was observed, analyzed, and discussed. Child and youth protagonism found a space to advance and develop in this discipline.

The biggest challenge lies in the creation of a new outlook: we simultaneously are nature, and with it we also interact; on its survival our own survival depends. The formation of planetary citizens, part of nature, and thus in constant symbiosis, is a difficult task; to change the mental model of adults in order to ensure a sustainable attitude in the learner is the tireless goal of this work.

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Links

Below are two blogs and related facebook pages that were created for the Elementary Education cycle II component of the Science and Citizenship (CC - Ciência e Cidadania) project. These blogs and pages are in their initial stages, and students will gradually publish more information as it becomes available.

Blogs:

www.reciclagemnacionalitba.blogspot.com.br
www.aguapreciosanac.blogspot.com.br

Facebook Pages:

Erased Heroes (Heróis Apagados)

<https://www.facebook.com/pages/Herois-apagados/1393666950855688?ref=ts&fref=ts>

Respect for All (Respeito com Todos)

<https://www.facebook.com/pages/Respeito-com-TODOS/1512356042319050?ref=ts&fref=ts>

References:

Capra, Fritjof et al. 2006. Alfabetização Ecológica: A Educação das Crianças para um Mundo Sustentável, Trad. Carmem Fischer, São Paulo, Cultrix.

Capra, Fritjof. 1996. A Teia da Vida. Trad. Newton Roberval Eichenberg, São Paulo, Cultrix,

Delors, Jacques. 2012. Educação: um tesouro a descobrir, São Paulo, Cortez, Brasília, DF, UNESCO.

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