

First steps for the education of the future

The effects of the climate crisis are becoming increasingly evident and inevitable. The urgency has drawn the attention of different disciplines to the question of the need for structural change: in production, consumption, transport, governance, *education*. A change that, to be realised, certainly requires institutional guidance, but not only.

In sociology, by *socialisation* we mean the transmission of the purposes and means associated with the different social roles to the new members of society, through symbols and meanings of the social context, the expectations of others on what is considered as *normal*, the vision of the world linked to the culture of belonging, the conceptual frameworks within which it is appropriate to operate. In this way, the socialisation agencies, including the educational system, guarantee the continuity of the social system over time, orienting new members to the skills that assure social stability. Therefore, new educational modalities can allow the transmission of new conceptual frameworks, more suitable to face the complexity of today's problems.

As the data in the book "Children and Ecology"¹ demonstrate, the effectiveness of the method with which the issues relating to the environmental crisis are presented is proportionally correlated to the rise of a certain degree of awareness - and consequent implementation - of pro-environmental behaviours. For this reason, it is extremely important to identify the limits and strengths of competences in the field of environmental education, in order to transmit goals, values and, therefore, concepts up to models of behaviour more appropriate to the complexity that characterises today's challenges.

Among the many educational approaches, the ecoliteracy (ecological literacy) one arises in opposition to the technical-scientific one, of which research has shown various limits: firstly, it treats environmental issues by untying them from each other and from the social context in which they are inserted, involving the elaboration of simple and circumscribed interventions, in the context of a society that is not questioned in its structural aspects. Ecoliteracy recalls the need for a radical reform of the dominant culture, both in civil society and in Western educational institutions, towards which it takes a critical perspective aimed at reconstruction: on one hand, it recognizes the positive aspects of consolidated educational trends, therefore aims at the conservation of the rational-analytical approach functional to the identification of phenomena and cause-effect relationships; on the other hand, it tries to buffer its negative effects, or rather the blind faith in scientific innovation deemed capable of facing the environmental crisis alone. This assumption implies the passage from an anthropocentric paradigm to an ecological model of historical understanding, mostly using educational methods of "research-action", in which students learn by doing.

The "Io Sono"² association, which organises environmental education projects focused on the outdoor experience, makes ecoliteracy its central focus.

*"The goal is not only the knowledge but the realisation and creation together with them (the children), from their vision of how we could improve our environment [...] Their participation for us is always active and it must be them, not adults, to tell them what to do [...] This is fundamental for us because they are not listened to and they actually have many ideas"*³.

Learning here is reversed: free from the traditional educational framework, children are the leading

¹ CARRUS G - PASSAFARO P. - PRICHIO S., *I bambini e l'ecologia. Aspetti ecologici dell'educazione ambientale*, Carrocci, Roma 2010.

² Associazione fondata per riflettere sulla trasformazione tecnologica e il ruolo dell'uomo (<https://iosono.info/>)

³ Dichiarazione di una rappresentante dell'associazione IO SONO, nel corso di un'intervista tenutasi il 15/05/21 durante l'osservazione del progetto "lo sbarco di Enea".

actors of the development of solutions to problems they face during the projects' lifetime.

Even in the Fondo Pizzigoni⁴, which operates according to the pedagogy of the Renewed School, school education places the child at the centre as a driving force of change; in fact, the underlying principle is the respect and development of children according to nature and truth. Therefore, in this renewed teaching environment, the care for the environment is essential. Very important is the need to exploit the predisposition of children to tell stories, to be listened to and at the same time assume the role of catalysts for parents' attention towards these issues. The results of the application of this approach can be consulted in the Digital Pedagogy Papers⁵, which summarise different experiences of outdoor environmental education. The Notebooks present projects carried out with children aged 2 to 13, in some cases with the participation of parents, and training courses for educators.

From their analysis it is possible to identify some recurring characteristics that have made it possible to achieve positive results. The methods and theoretical frameworks applied can be summarised as follows:

- EXPERIMENTAL METHOD: based on the concrete and personal experience of the child, it aims at a type of education in the open air, encouraging direct contact with nature's elements
- M.I.T.E.: starts from known objectives and processes to generate new knowledge. The emphasis was placed on the dynamics of multiple interaction, the basis of epistemic creation by the group
- FOREST SCHOOL APPROACH: the connection of children with nature is possible thanks to the periodic attendance of the same natural space which allows them to grasp the changes due to the seasons and to develop attention and care for the environment; it is fundamental for the development of respect for the planet as a whole. Such a holistic approach guarantees the intellectual development of children
- BIOENERGETICS: the human being is understood as a whole, as a unitary psychosomatic organism crossed by energetic processes and flows. It is aimed at understanding the individual in energy terms: the work on the body is associated with that on the mind to help people solve their existential, relational, communication problems
- COSMIC MONTESSORIAN VISION: learning is rooted in the natural environment, the place in which the child is rooted
- INTEGRAL EDUCATION (Pizzigoni): bringing the child into nature means allowing them to observe, touch, try and verify with hand the facts that occur in nature to educate in a complete and reality-based way.

The main results observed are listed below:

- ability to adapt to the environments in which the activities took place and improved problem solving abilities
- all the senses are involved in the learning process by stimulating the children's curiosity and imagination of both the artistic spirit and scientific thinking
- children demonstrate that they are capable of recognizing dangers and avoiding them
- outdoor experiences have proven capable of activating both the cognitive processes of thinking and doing, allowing for complete learning

⁴ <https://www.fondopizzigoniscuolainfanzia.it/>

⁵ Notebooks FISR S.M.A.R.T., seconda serie di quaderni digitale, *Forum Outdoor Education: insegnanti, dirigenti, esperti, genitori, nonne, sperimentatori della pedagogia della natura*, FISR05, March 2022.

- during these projects, shy children became more self confident, the lively ones learned to contain themselves and the less interested ones developed attention and concentration
- through the materials found in nature it was possible to hold interdisciplinary lessons
- the activities in small groups made it possible to develop relational and collaboration skills, not only among the children, but for all the members of the educating community, skills which are the basis of civil coexistence, solidarity and common responsibility
- the participating children expressed interest, desire to share and enthusiasm
- the introduction, during these training courses, of the concept of eco-sustainability meant that the children learned to know and respect Nature
- Nature has proved to be an important teacher in identifying tools for stress management, conflict resolution and support for movement and play
- benefits on the psycho-physical state of all children, especially those with Special Educational Needs (SEN) and/or certified disabilities of various levels; improvements in academic performance; decrease in stress levels and better management of emotions.

Having ascertained that the approaches prove to be valid, it is clear that very often pedagogical interventions and theories are concentrated too much in the childhood range, without real planning for the subsequent developmental stages. In particular, the sustainability of the positive attitudes learned in primary school owes its strength to the integration of increasingly integrated and analytical knowledge, which investigates the complexity of systems and problems and stimulates more concrete responses. In fact, the fertility of secondary education lends itself particularly to the elaboration and/or implementation of innovative practices in more complex and institutionalised systems, such as entrepreneurship, work, citizenship, social and research initiatives and so on. What should be investigated, therefore, is the set of complementary skills to support and – above all – increase sustainable behaviour, to guarantee interventions such as those carried out by IO SONO (for example, it is difficult to understand the importance of sustainable actions in entrepreneurship if we do not have a background of knowledge about externalities and the related collective costs, knowledge which underlies the education in the principles of economics, which not all training offers include).

The objective of a new reflection on education, therefore, should be to accompany young students to be aware of and trained on the issues of sustainability, in its most complete meaning, starting from the integration of sustainable behaviours in the small gestures of daily life, up to the integration of innovative solutions in more complex systems, as protagonists of change and transition, as citizens, workers, entrepreneurs and decision makers of the (near) future.

In order to be incisive in the change and in the transition towards sustainable paradigms, school needs a planning supported in the long term, a composite vision of the whole with respect to the real necessary skills, which embrace the versatility of the nuances under which it is possible to know, understand and manage the ecological transition from a planning, political and entrepreneurial point of view. The attention of the new generations is already aimed at the climate crisis, generating a positive vortex of ideas and solutions that arise (already spontaneously) with a bottom up logic. The trends of consumption, food, fashion, recycling, recovery of waste and all-round responsibility with respect to the environment are profoundly changing and, in all likelihood, will be able to remove the old consumerist paradigms on which we have settled our culture and which still appear valid.

Therefore, the positive and virtuous thrust must necessarily be supported by deeper awareness of the mechanisms for generating and managing externalities. Fundamentals seem to be:

- financial education and knowledge of the economy and basic mechanisms of the market
- education and incentives for sustainable entrepreneurship (such as the B-Corp model)
- STEAM knowledge for the application and development of new innovative technologies that support the realisation of solutions and ideas
- knowledge of law and the role of institutions, as well as the functioning of national and European territorial management, to consciously know what moves - and how - around us
- teaching of the limits of our ways of knowing, victims of errors of perception linked to our senses, to which are added mental and intellectual errors. This would make it possible to overcome that Western rational model unable to grasp its own limits
- teaching the multidimensionality of human nature (duality nature-culture and individual-society-species triad)⁶
- construction of the terrestrial identity, which is taught by the awareness of the common destiny on a planetary level, starting from the history of the planetary era
- teaching of strategies for managing and dealing with uncertainty, related to risk and precaution, to the means-purposes relationship, to the action-context relationship.

With respect to systemic and complex thinking acquired in the previous educational phases (as noted in the projects examined), it is important not to lose the overall vision: in fact, in secondary school the compartmentalisation of disciplines takes place and distances the human mind from its natural ability to integrate knowledge; thus, the departure from the perception of globality reduces both the perception of responsibility and solidarity.

In this historical period in which multilevel and multidimensional interventions are required to deal with the environmental crisis, it is good to reflect also on education which should include a series of knowledge to be made institutionally basic. In this way it will be possible to plant the seeds to make a new system flourish, given that the current one has already proved to be problematic innumerable times, and not only for the environment.

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⁶ MORIN E., *I sette saperi necessari all'educazione del futuro*, Cortina Editore, Milano 2001.