

**CONTRIBUTO TEORICO**

## Education in response of climate change and social inequity. The ecological and global citizenship.

## L'educazione in risposta ai cambiamenti climatici e alle disuguaglianze sociali. Cittadinanza ecologica e globale.

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### ABSTRACT ITALIANO

Ciascun abitante della terra sta sperimentando la gravità delle conseguenze di un uso sconsiderato delle risorse naturali e della diffusa iniquità socio-economica. Tuttavia, le risposte individuali e collettive, istituzionali e politiche, locali e globali, risultano essere estremamente flebili. Pertanto, è necessario dar vita ad un complesso rinnovamento culturale, per accompagnare ciascun essere umano a disegnare personali stili ecologici e sostenibili di abitare il mondo nelle diverse età e contesti di vita, per garantire concrete possibilità di un futuro degno di essere. È una sfida primariamente educativa. Numerose ricerche consentono una piena comprensione della situazione attuale in cui versa la casa comune, nelle quali si evince l'intreccio esistente tra cambiamenti climatici, disuguaglianze sociali e stili di vita. Si vedrà, quindi, come la nozione di sostenibilità necessita di essere letta in ottica globale-sistemica, interfacciandosi con il discorso pedagogico.

### ENGLISH ABSTRACT

Every inhabitant of the Earth is experiencing the severity of the consequences of reckless and inconsiderate use of natural resources and widespread socio-economic inequity. It is necessary to initiate a complex cultural renewal according to a systemic-relational paradigm, to accompany every human being in designing personal ecological and sustainable styles of inhabiting the world in different ages and contexts of life, in order to guarantee concrete possibilities for a future worth living for all humankind. This is primarily an educational challenge. There is a wealth of data and research to fully understand the current situation in which the common home finds itself. The following will highlight some recent studies in which the intertwining of climate change, social inequalities, and lifestyles is evident. It will then be seen how the notion of sustainability should be read from a global-systemic perspective, thus interfacing more easily with the theory of education.

### Introduction

Environmental issues and their anthropological roots (Francis, 2015) affect every human being and involve significant human, community, and grassroots efforts. In the face of inexorably rising temperatures (WMO, 2024), increasing ecosystem degradation and biodiversity loss (IPBES, 2019; GCRMN, 2021), escalating extreme weather events, rising sea levels, melting ice in the Arctic, increasingly frequent wildfires, drinking water issues, and water grabbing, deforestation, and desertification of vast areas of the planet (Covey et al., 2021), inhabiting the Earth in an ecological manner is not only a moral imperative but also a fundamental task of education.

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For there to be a real change of pace in our relationship with the environment, it is necessary to initiate an overall cultural renewal, which strongly calls into question educational processes. It is more urgent than ever to disseminate a pedagogy and philosophy of education that empowers tomorrow's citizens to address issues that can no longer be postponed (Mortari, 2020).

Every inhabitant of Earth is experiencing the severity of the consequences of imprudent and reckless use of natural resources and widespread socioeconomic inequity. However, individual and collective, institutional and political, local and global responses appear extremely weak in terms of reversing global warming and still lack impact in promoting true sustainable and equitable development. In fact, despite the fact that the United Nations meetings began in 1972 in Stockholm, there are no signs of reversal to date. Current commitments to meet the Paris Agreement targets are insufficient to keep temperature rise below  $+1.5^{\circ}\text{C}$ . Thus, the possibility of a dramatic  $+3^{\circ}\text{C}$  temperature increase by the end of the century looms, with an inevitable intensification of the impacts of the climate crisis, especially at the expense of the poorest and most vulnerable populations (Hallegatte et al., 2018).

The urgency of this challenge demands relentless dedication: we must embark on a comprehensive cultural transformation, guiding individuals towards the adoption of personal ecological practices suitable for various life stages and contexts, ensuring a sustainable coexistence with our planet. Fundamentally, this is an educational endeavor. Ample data and research are available to grasp the current predicament of our shared home, marked by the interplay of climate change, social disparities, and lifestyle choices. This essay, starting from the cultural perspective promoted with the Encyclical *Laudato si'* – as the "cultural key" to the entire text – expands the theoretical insights of educational research to advocate for a holistic approach to ecological education, lifelong and lifewide.

### **Between climate crisis and global inequalities: navigating our Planet's perilous state**

No environmental issue has ever aroused such collective concern as climate change, which, because of its interconnections with diverse living and social ecosystems, is perceived as a risk to the very survival of the human species. The documents of the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, by presenting a greater integration of natural and socio-economic sciences, confirm what is already widely known: human activities are altering the global climate system, global warming is unequivocal, and the consequences of climate change undermine the survival of the Planet and have serious impacts on society (IPCC, 2022b; 2023).

These documents highlight the need for political and social action toward full intergenerational climate justice (Shue, 2014; Goodman, 2009) that listens to and accommodates the concerns of those who cannot defend themselves in an increasingly exclusionary world. A greater increase in global temperatures would, in fact, result in less capacity to respond in terms of adaptation – "Adaptive capacity" and "Coping capacity" (Hoffmann & Sgrò, 2011) – because greater risks would be associated with populations and ecosystems, agricultural activities, consequences related to water scarcity, intensified flooding and extreme events, and sea level rise (IPCC, 2022a). An

"unsustainable" world is what is outlined for future generations and, above all, for the most vulnerable and poor on the Planet.

According to Oxfam International, the gap between the richest and poorest people on the planet has reached new extremes and shows no signs of abating (Oxfam, 2016): the richest 1 percent of the population owns more wealth than the rest of the world. This situation reflects levels of global inequality that may not have been seen in over a century, undermining economic growth and social cohesion, while severely affecting the living conditions of the poorest people on the planet. The study also reveals how power and privilege are used to manipulate the economic and financial system, further widening the gap between the richest and the rest of the population. Scholars argue that the fight against poverty cannot be won until the crisis of inequality is addressed. Moreover, according to the World Bank Group, the COVID-19 pandemic has significantly exacerbated the situation, triggering the most severe global economic crisis in more than a century (World Bank, 2022).

The socio-economic issues highlighted by these studies compound the already disturbing entanglement with the deepening climate crisis and related lifestyles.

According to the most recent data published by Oxfam International and the Stockholm Environment Institute (Oxfam, 2020), it is estimated that from 1990 to 2015 - a period during which annual emissions grew by 60 percent and cumulative emissions doubled - the richest 10 percent of the world's population (approximately 630 million people) were responsible for 52 percent of cumulative carbon emissions. Within this group, the richest 1 percent (about 63 million people) alone would be responsible for 15 percent of cumulative emissions, while the poorest 50 percent (about 3.1 billion people) accounted for only 7 percent, utilizing a mere 4 percent of cumulative emissions.

In the same published estimates, it is observed that the richest 5 percent (approximately 315 million people) are responsible for more than one-third (37 percent) of total emissions growth, while the total emissions growth of the richest 1 percent is three times that of the poorest 50 percent. The inequality highlighted by these studies is such that the richest 10 percent alone could deplete available carbon budgets within a few years, even if the emissions of all other social groups were to drop to zero.

The aforementioned study indicates that in recent decades, the climate crisis has been significantly fueled by the lifestyles and excessive consumption of the already affluent, further widening the gap in social inequality.

The report's authors emphasize the inescapable task for governments to seize this historic moment to construct more equitable economies within the boundaries our planet can sustain. This urgency arises from the realization that those who are already suffering or will suffer most from this injustice are precisely the populations least responsible for the climate crisis: the poorest and most marginalized people, who are already grappling with the impacts of climate change, and future generations who will inherit a depleted carbon budget, along with a world hurtling toward climate collapse.

From the presented data, it is evident that the current development model of the most advanced and prosperous societies requires decisive action to reverse course in favor of humanity's well-being and to safeguard life on Earth. Assuming the role of responsible

custodians of the common home (Francis, 2015) today represents a commitment and duty from which no one can be exempted, as the environment serves as the context in which life's relationships thrive and multiply. No environmental issue has ever elicited such heightened collective concern as climate change, which, due to its interconnections with diverse living and social ecosystems, is perceived as a risk to the very survival of the human species. Beyond sensationalist considerations of environmental issues, it is evident that at the core lies "the educational and spiritual consciousness to foster planetary fraternity [...] as a result of an innovative and ecological reengineering of production processes" (Malavasi, 2020).

### Seeking solutions: addressing humanity's pressing challenges

Pope Francis, in his Encyclical *Laudato si'*, reminds us how "We are faced not with two separate crises, one environmental and the other social, but rather with one complex crisis which is both social and environmental" (2015, n. 139). So, the individual and the environment are so closely co-implicated with each other and interdependent, each being structurally shaped on the contours of the other, that it becomes strictly speaking impossible to think of them as dualistically opposed autonomous realities.

Margiotta (2015) reminds us that "The individual expresses the processual dynamics of the environment he inhabits and for which he is evolutionarily predisposed; similarly, the environment is constituted as the horizon of manifestation of individual organic phenomena: the individual-environment unity thus results overall as an autonomous systemic reality" (p. 95). Therefore, addressing this issue necessitates an integrated approach that not only combats poverty and restores dignity to the marginalized but also prioritizes the stewardship of our common home (Francis, 2015).

The mentality of maximum gain at minimal cost, disguised in terms of reasonableness, progress and illusory promises, makes impossible any sincere concern for our common home and any real preoccupation about assisting the poor and the needy discarded by our society (Francis, 2023, n. 31).

Therefore, it is essential to transcend the man-environment dichotomy, characteristic of a modernist perspective that places the material world under human dominion, in favor of a vision that emphasizes deep interdependence and universal brotherhood, reflecting a perceived cosmic unity of reality.

To transcend the prevailing anti-ecological paradigm, humanity today must champion a perspective of human existence as an intricate network of interrelations (Mortari, 2017).

There is an increasing need for a development vision that is more attuned to the dignity of each person and the cultivation of social solidarity, prioritizing the quality of life over mere quantity, often measured solely by economic parameters. The globalized economy frequently prioritizes individual interests and material wealth at the expense of community growth and the common good. As Pope Francis suggests in the Encyclical *Laudato si'*, there is a need to grant more room to a politics liberated from mere economic thinking but in dialogue with it. Such politics should be grounded in noble principles and dedicated to serving life on Earth. It should encourage exemplary practices, foster creativity in the quest for new directions, and facilitate both individual and collective

initiatives. "A healthy politics is sorely needed, capable of reforming and coordinating institutions, promoting best practices and overcoming undue pressure and bureaucratic inertia. It should be added, though, that even the best mechanisms can break down when there are no worthy goals and values, or a genuine and profound humanism to serve as the basis of a noble and generous society" (Francis, 2015, n. 181).

In the context of addressing humanity's challenges, especially those related to ecological sustainability and social inequalities, education plays a pivotal role. It serves as a foundational tool for empowering individuals with the knowledge, skills, and values needed to make informed decisions and take responsible actions that contribute to a more sustainable and equitable world. Conceiving of education as a catalyst for building a new society and shaping a new human being entails recognizing that "It is always society that educates, even though its actions may be unethical, as society's beliefs, values, and deep-seated attitudes inevitably permeate, despite any barriers, into the individual psychological fabric of the learner and influence their beliefs and behavior" (Bertin, 1968, p. 285). Indeed, what occurs in the ecosystems of the world - in the environments where life events, including human affairs, unfold - holds profound significance and plays a crucial role in nurturing the growth and development of each individual throughout their life journey. It is essential to cultivate humanity in order to "learn to 'be there' on the planet," meaning "to learn to live, to share, to communicate, to be in communion [...] as inhabitants of planet Earth. We must not only belong to one culture but to the Earth as well. Our commitment should not be to dominate, but to heal, to enhance, to understand" (Morin, 1999, p. 78).

Given the inherent connection between the challenges within education and local and global socio-political phenomena, taking individual and collective action to address issues damaging the planet and prevent the emergence of new ones involves cultivating citizens who grasp the existential reality of "glocal" interdependence.

These citizens must be conscious of and accountable for their actions and their impact on ecosystems. This requires a commitment to scrutinizing the aims, objectives, and methods of lifelong human education, aimed at fostering comprehensive knowledge, diverse skills, and strong virtues. Such education should instill moral principles governing civil coexistence towards the pursuit of the common good. Sustainability thus becomes an educational commitment to an ethical vision of societal development, ensuring that the "needs of the present are met without compromising the ability of future generations to meet their own needs" (United Nations, 1987). The environment, which has long been a subject of study in pedagogical thought (Flores D'Arcais, 1962), must be rethought as an integral educational element, not merely as a background against which educational activities take place.

Pedagogical theory – guided by critical, problematic, and reflective knowledge – investigates social and environmental phenomena with the intention of purposefully guiding personal and societal action towards the realization of human flourishing within the framework of a good life, characterized by just institutions (Ricoeur, 1990). Indeed, through education, individuals not only develop themselves but also contribute to the construction of society as they navigate various life environments. Therefore, education

proposes diverse heuristic approaches that extend beyond seeking technical solutions to address the unsustainability of current development. Instead, it fosters reflection on the human roots of anti-ecological thinking and behaviors that hinder the creation of a sustainable society (Mortari, 1999). Educating individuals to inhabit the Earth ecologically thus emerges as a central theme for envisioning a different conception of human progress, one that promotes ecological consciousness beyond the technicist and reductionist interpretations prevalent today. This approach transcends simplistic notions of environmental education, which often limit ecology to fragmented disciplinary knowledge or the transmission of isolated virtuous behaviors, thereby glossing over the complex nature of our relationship with the environment.

### **Educational response as a holistic educational proposal**

The role of education in addressing issues of change, particularly concerning attitudes and behaviors, is of interest to numerous studies investigating the effectiveness of training practices in combating climate change and contributing to sustainable development. Despite widespread awareness of the consequences of our lifestyle choices on climate change, this knowledge does not always translate into changes in behavior. In other words, understanding that the increase in climate-altering gases in the atmosphere stems from the modernization of industrial society, societal governance, and individual lifestyles does not necessarily lead to a complete acceptance of reality or a subsequent change in harmful behaviors.

Several studies (O'Neill, et al., 2020; Wynes, 2017; Cordero, et al., 2020) have attempted to quantify the concrete impact of educational efforts in terms of emission reductions or tangible and quantifiable impacts in the medium to long term.

These studies explore the hypothesis that an educational pathway, bridging comprehensive knowledge of climate change solutions with a personal connection to them, can have spillover effects in the daily behaviors of trainees, thus resulting in measurable emission reductions.

However, these studies consider environmental education only at the school subject level. Instead, the educational response must include a comprehensive proposal that involves the entire educational system in an integrated manner, both within school curricula and in areas and places of interest to people. This proposal should be based on transformative eco-oriented learning, extending beyond exclusive cognitive knowledge to action, and involving students and young people at the socio-emotional level in the development of knowledge, skills, and moral values. E. Bardulla (2006) underscored the importance for holistic human development, advocating for the cultivation of attitudes and behaviors suited to tackling the challenges facing our planet.

While educators and trainers should indeed be trained in education for sustainable development, encompassing environmental education, climate change, and biodiversity, it is imperative that the entire governance of education and training services becomes more oriented towards promoting ecological engagement. This means that the involvement of schools and agencies should extend beyond teaching and supporting environmental action to create an ecological learning context.

In the complexity of our globalized world, it becomes imperative to recognize the significant role of ethical values. Birbes (2016) advocates for a profound realization of our identity as Earth's inhabitants and ecological citizens, urging a reevaluation of our responsibilities towards both the natural world and human civilization. Accordingly, the educational endeavor must translate into tangible proposals that foster poly-relational environments. These should not only impart new knowledge and ecological awareness but also construct frameworks for holistic relationships. Such educational contexts aim to facilitate sustainable living experiences, promoting meaningful interactions with fellow humans and the broader biosphere, while acknowledging the intrinsic value of all life forms.

Consequently, educational action should not be limited to the transmission of content on ecology alone, as ecological-oriented cultural renewal necessitates a radical and concrete change in the perception of reality. It is essential to cultivate an ecological consciousness of the environment in the educational sense, considering its variety and problematic nature (Cfr. UNESCO, 2021). The environment should be perceived as part of the self, understood in both the "lived environment" and "studied environment" contexts, as advocated by Flores d'Arcais (1962). To achieve this, the environment must be experienced in a concrete and tangible manner, becoming an integral part of each learner's lived reality, thereby adhering to life and contributing to the authenticity of the human person.

It is necessary a learning approach that fosters an ecological sensibility, attentive to relationships with context; a learning that operates at the level of epistemologies, changing premises, perspectives of meaning, generating new contexts, affecting the very conditions of learning; a change centered on the transformation of people and contexts, addressing the social practices of meaning-making (Margiotta, 2015).

In light of the foregoing, it is meaningful to commit to fostering "ecological and global citizenship" – a new paradigm of interaction among individuals, diverse societies, and the natural environment that enables us to reconnect with our ontological status as siblings (UNESCO, 2019). This new relational model is characterized by the transcendence of individualism, the adoption of lifestyles imbued with solidarity, responsibility, and care. Training should be centered on the subject as a social actor, a participant in the meaning-making process, an active player in the construction of knowledge and in the learning process, constitutively embedded in life contexts. The strategic behavior of subjects is such with respect to the possibility of being lifelong learners (Margiotta, 2015).

## Conclusions

Ecological education, as an endeavor focused on redefining humanity's interaction with the biophysical world's living matter, necessitates a critical examination of the foundations underpinning contemporary culture. It calls for the envisioning of novel perspectives on progress and the world, fostering more generative development processes. Sustainability, therefore, embodies an educational commitment as part of an ethical vision for societal development. Consequently, promoting sustainability as a concept that fosters civil coexistence rooted in fraternity necessitates a dedication to steering social contexts

towards "civic engagement" and the cultivation of an ecological culture. This entails rediscovering a value-driven approach that prioritizes human development within community relations, the stewardship of the planet, the preservation of ecosystems, and the advocacy for universal rights and the common good. At its core, a culture of sustainability is an education in democratic and social living.

The educational response should be framed as a holistic educational proposal, encompassing a broad spectrum of learning opportunities and pedagogical strategies.

The perspective of lifelong learning significantly impacts the sustainable development of society, fostering ecological development, promoting democracy, justice, and social, scientific, and economic advancement. It also cultivates the idea of a world where dialogue replaces conflict and a culture of peace based on justice prevails. Every individual is called upon to participate directly in the process of ecological growth as an active agent of socioeconomic development, advocating for creative and responsible change. Training practices play a crucial role in developing skills to address current challenges, solve problems, manage conflicts, and promote innovative approaches to work, thereby preparing individuals to contribute to building a more equitable and sustainable society.

An ecological consciousness rooted in hope for the future of societies recognizes that authentic development must be integral. Achieving this requires the democratic governance of sociopolitical and economic dynamics, the exercise of educational responsibility within the complex configuration of educational environments, and legal frameworks that contribute to establishing diverse, and sometimes conflicting, interpretations of the notion of "law." The advancement and promotion of knowledge and human capital necessitate a culture of legality as a domain of dialogue and the construction of coexistence. Today, this cannot ignore the need for the dissemination and consolidation of an ecological consciousness of responsibility in planetary development (Malavasi, 2024).

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