

BETWEEN SUSTAINABILITY AND CARE: EDUCATION FOR SUSTAINABLE CONSUMPTION

*Entre la sostenibilidad y el cuidado: la educación para el
consumo sostenible*

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ABSTRACT

The enormous challenges posed by democratic regression, social polarisation and climate change in our educational environments make it necessary to collectively transform pedagogical practices based on parameters of justice, equity and sustainability. We propose an ethical, philosophical and pedagogical reflection on the evolution of this latter concept, from expansionist and reductive mechanistic models to holistic and integrative perspectives. Drawing on Aarne Ness's deep ecology and Stephen Sterling's thinking on complete systems, we focus on the regenerative approach to sustainability and criticisms of the reactive approach that predominates in public discourse.

Education for sustainable consumption, situated at the nexus between education for peace and education for sustainable development, is presented as a fundamental axis for discussion on these issues. The challenge of sustainable consumption is to reduce direct, structural and cultural violence related to consumption, and to foster peaceful relationships that respect the authentic needs and fundamental rights of human beings and Nature. The imperative of inclusive and equitable education for social justice requires incorporating critical training for a global citizenship that is aware of the impact of consumption on the present and future of humanity and the planet. This involves creating democratic spaces for situated learning, linked to their environment and aligned with an ecological educational model that focuses on care, shared responsibility and awareness of interdependence.

Keywords: environmental education; education for sustainable development; ecology; inclusive education; active learning.

RESUMEN

Los enormes retos que plantean el retroceso democrático, la polarización social y el cambio climático en nuestros entornos educativos hacen necesario transformar colectivamente las prácticas pedagógicas desde parámetros de justicia, equidad y sostenibilidad. Proponemos una reflexión ética, filosófica y pedagógica sobre la evolución de este último concepto desde los modelos mecanicistas expansionistas y reductores hasta las perspectivas holísticas e integradoras. Desde la ecología profunda de Aarne Ness y el pensamiento en sistemas completos de Stephen Sterling nos centramos en el enfoque regenerativo de la sostenibilidad y las críticas al enfoque reactivo que predomina en el discurso público. La educación para el consumo sostenible, situada en el nexo entre la educación para la paz y la educación para el desarrollo sostenible, se presenta como un eje fundamental para la discusión sobre estos aspectos. El reto del consumo sostenible es el de reducir la violencia directa, la estructural y la cultural relacionadas con el consumo, y fomentar relaciones pacíficas en la medida en la que se respeten las necesidades auténticas y los derechos fundamentales de los seres humanos y de la Naturaleza. El imperativo de la educación inclusiva y equitativa para la justicia social requiere incorporar una formación crítica para una ciudadanía global consciente de la repercusión del consumo en el presente y futuro de la humanidad y del planeta. Esto implica la creación de espacios democráticos de aprendizaje situado, vinculados con su entorno y alineados con un modelo educativo ecológico que se centre en el cuidado, la corresponsabilidad y la conciencia de interdependencia.

Palabras clave: educación ambiental; educación para el desarrollo sostenible; ecología; educación inclusiva; aprendizaje activo.

1. WORLDVIEWS REGARDING SUSTAINABILITY

With roots in the Kantian *Weltanschauung*, the word *worldview* means an all-encompassing *vision of the world* (Alessiato, 2022), reflects the whole of beliefs that nurture our views of the reality, of the human nature, of the purpose of life and human relations, “shaped by our individual life stories in the context of our collective cultural histories” (Danesh, 2006, p. 66). A society’s worldviews quietly intervene to “channel attention, filter information, categorise experience and anchor interpretation, orient learning, establish moods, secrete norms, and legitimate narratives, ideologies and power structures” (Gladwin et al., 1997, p. 245). Generally speaking, worldviews fall into three different frameworks: mechanistic, organicist and contextualist (Danesh, 2008, p. 149):

- The mechanistic worldview sees both the individual and the world, as well as the dynamics of their respective development and change, within a mechanical and machine-like framework;
- The organismic worldview sees the world as a living organism in a constant state of change, adaptation, and modification;
- The contextualistic worldview considers all human behaviour to have meaning and to be open to comprehension within a specific social–historical context.

These frameworks relate, communicate, and even compete, and this inter-relationship allows us to understand the limitations of a worldview and evolve (Alessiato, 2022). The primary vehicle, in all societies, for both the transfer and formation of the worldview, is education because it has a profound impact on how we respond to our life experiences and how we shape them (Danesh, 2006, 2008).

Western societies remain trapped in an expansionist, mechanistic worldview that places human enterprise above, and essentially independent of Nature¹ (Cole, 2012; du Plessis, 2012). This worldview perceives the natural world as something different, separated from the human being, and gives it a merely instrumental function. However, the world that environ us is also within us, we are made of it, it nourishes us and we breathe it (Reed, 2007), therefore, it is not something that surrounds us but something with which we organically penetrate. Sterling (2003) identifies in the work of environmental educators such as David Orr, among others, the emergence of an ecological worldview that is appropriate for generating profound changes through education. This is not a new worldview, but a rediscovery, a spiritual awakening that integrates reasoning with a deep

¹ We use this term with a capital letter, to refer to the set of everything that exists and that is determined and harmonised in its own laws (Real Academia Española [RAE], s/f-d, def. 2).

ecological perception. The perception from deep ecology recognises the fundamental interdependence between all phenomena and the fact that, as individuals and as societies, we are all immersed in (and ultimately dependent on) nature's cyclical processes (Capra, 1998).

Deep ecology's perception influenced the philosophical school founded by the Norwegian philosopher Arne Naess in the early 1960s by distinguishing between *shallow* and *deep* ecology. Contrary to the anthropocentric mechanistic worldview, the deep ecological vision is holistic, understanding reality from the comprehension of the whole and the interdependent relationships that compose it. According to Capra (1998), deep ecology does not separate humans – or anything else – from the natural environment; it sees the world, not as a collection of isolated objects, but as a network of fundamentally interconnected and interdependent phenomena; deep ecology recognises the intrinsic value of all living things and sees humans as a mere strand of the web of life.

This view of the world and of reality is consistent with indigenous knowledge systems of all inhabited continents, as well as with philosophical and religious traditions of the East. It is also reflected in the spirituality of Christian mystics, in the ideas of Western thinkers such as Baruch Spinoza, Alfred North Whitehead, Jan Smuts, and Carl Jung, and is reinforced by scientific discoveries in fields ranging from quantum physics to ecology (Capra, 1998; du Plessis, 2012).

The holistic understanding of reality transcends the domain of ecology and nurtures systems thinking with two key concepts: the concept of *community* and the concept of *network*. By understanding the ecological community as a set of organisms connected together into a functional whole by their mutual relationships, ecologists eased the shift of attention from organisms to communities and, in general, by applying similar concepts at different levels of systems (Capra, 1998).

From a systemic perspective (Gallopín, 2003), sustainability is an attribute of systems open to interactions with their external world. It is not a fixed state but the dynamic preservation of the essential identity of the system in the midst of permanent changes. This is an emerging property and can be seen as the ability of a system to sustain itself in relation to its internal and external environments, since all systems are made by subsystems and are parts of large meta-systems (Sterling, 2003). When we apply this thinking to the human system and its sub- and meta-systems, we speak of living systems, that is, systems in which all things are alive and in the process of *becoming* (Reed, 2007). These systems exist in interdependence because human beings, while we are physical and biological beings, we are also social and cultural beings, our history is continuously written and we have a mental and an emotional body that make us interdependent. Human multidimensionality and interdependence require

education for human understanding, that is, a relationship of empathy that tries to see in the subjectivity of the other (Morin, 1999). Empathy is linked to the value of non-violence and peace as an integrated relationship of harmony with oneself, with other beings and cultures, and with the larger whole of which we are a part (UNESCO, 2000). Consequently, research in education itself is a search for meaning in which people discover and string together the most significant issues in a continuous process of interaction of problems. This way, the research will become more pedagogical the more critical, and more critical in so far as it stops getting lost in the narrow frameworks of partial views of reality, of *focalist* views of reality, and focuses instead on understanding the whole (Freire, 2007).

This teleology based on interdependence affects the very nature of inclusive, equitable and quality education. School is viewed by UNESCO as a key space to promote epistemic practices and form broader constructive alliances between different epistemologies and ecologies of knowledge (UNESCO, 2022). Educational inclusion requires, therefore, to assume through formal education a dynamising role for the transformation towards more just, responsible and egalitarian societies based on principles of democratisation, interculturalism, ecology and territorialisation (Moliner, 2020).

2. FROM SUSTAINABILITY EDUCATION TO SUSTAINABLE EDUCATION

The idea of sustainability education is attributed to the Environmental Education movement of civil society in the 70s, which opens spaces to integrate the notion of sustainability into the educational field. María Novo (2009) explains that, with this movement, took place an unprecedented historical event: for the first time, together with the classical, anthropocentric objective of education to improve the individual, another goal of the same range appeared that we could call *biocentric* or *ecocentric*. This new goal aims to improve the life of ecosystems by respecting the conditioning factors and limits of nature.

The preparatory document for the 1992 United Nations Conference on Environment and Development, held in Rio de Janeiro – known as the Brundtland Report – defines sustainable development as development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs (Naciones Unidas, 1987). The 2005-2014 United Nations Decade of Education for Sustainable Development (ESD Decade) aimed to create a global framework that would lead to a broad response and facilitate educational actions for sustainability at all levels, both in formal and non-formal education. According to the UNESCO Road Map for the Implementation of the Global Action Programme on Education for Sustainable Development, the ESD Decade was an effort by the United Nations to revalue the work that had been

carried out around and since the Rio Summit (Earth Summit) 1992 (UNESCO, 2014b).

2.1. *The concept of sustainability from a holistic perspective*

Two main approaches to the concept of sustainability stand out in the scientific literature: a reactive approach, associated with mainstream discourse and conventional sustainable development practices, and a regenerative one. The former focuses on efficiency and harm reduction, while the regenerative approach goes further, fostering systemic vitality and the co-evolution of ecosystems and communities, which is achieved through the adequacy of human activities. All this through a deep understanding of Nature and the relationship between human and terrestrial systems in order to configure health-generating relationships (Yunibandhu & Hallinger, 2025).

The international political project of sustainable development has been criticised for instrumentalising the term development from a Eurocentric economic logic that links poverty to the inability to consume the products of the industrial and technological processes. A consumption-based interpretation of growth and development that ignores existing social and cultural systems of relationship and knowledge, and expands the idea of needs beyond basic needs, to a set of rights and aspirations that stem from the longing for an ever-higher standard of living (du Plessis, 2012; Leff, 2013). Additionally, although the Johannesburg World Summit identified economic development, social development and environmental protection as interdependent and synergistic pillars of sustainable development (Naciones Unidas, 2002), the dominant discourse of sustainability is limited to a mechanistic approach from which problems are solved in fragments and, therefore, is unable to deal with the complexity and unpredictability that characterise the web of natural systems and their subsystems (du Plessis, 2012). In fact, multiple interconnected crises (wars and geopolitical conflicts, record heatwaves, devastating floods, and social conflicts stemming from crisis-driven human migration), intersect with complex and cumulative impact, and are the reflection of a deeper systemic crisis (*metacrisis*) that signals “the need for a fundamental shift in our underlying human systems and paradigms” (Yunibandhu & Hallinger, 2025, p. 2).

Faced with this reality, it is even more necessary to insist on the cultural dimension of sustainable development, as the basis and foundation of the interconnection between the economic, social and environmental dimensions. According to UNESCO (2006), *culture* is defined as the ways of being, relating to one another, behaving, believing, and acting that vary according to the context, history, and tradition in which humans live their lives. This integrated perspective of sustainability allows us to see the potential of education to cultivate responsible global citizens (McGregor, 2009). The regenerative approach

to sustainability offers a more appropriate framework for the development of a transformative pedagogy.

Within regenerative sustainability, the key to finding the balance between human needs and non-human nature's needs lies in endogenous sustainability, which enables self-improvement. Endogenous sustainability is linked to the concept of autopoiesis by Maturana and Varela which "describes how living systems sustain themselves through continuous self-generation, with each component participating in production and maintenance of the whole" (Yunibandhu & Hallinger, 2025, p. 9). Haraway (2016) problematises this issue by warning that life is not sustained in isolation and introduces the concept of *sympoiesis* (doing with) in reference to collaboration between species. Therefore, this approach is aligned with Aarne Ness's deep ecological vision that recognises the intrinsic value of all living beings by emphasising their interconnectedness and the need to reorient human values towards ecological harmony.

This regenerative approach is also aligned with the multidisciplinary thinking that nurtures the concept of development (Saura & Hernández Prados, 2008) and transcends economic monetarism, anthropocentrism and Eurocentrism, as well as the fragmented vision of development and sustainability. As a result, the economic component is interpreted in interrelation with the human and social pillar. Both dimensions have to be harmonised with the cultural and natural particularities of each context from a holistic vision of the community of life. According to Sen (2000), substantive freedoms such as political participation and freedom of dissent, opportunities to receive basic education or health services, as well as to have community ties, are among the constituent components of development. Sen emphasises the interdependence of economic freedom, political freedom, and freedom of participation, and the dramatic consequences that the absence of these freedoms can provoke.

The interdependence between different dimensions of sustainability is reaffirmed in the ESD Decade Monitoring and Evaluation Report (UNESCO, 2012), wherein Education for Sustainable Development is conceived from a holistic perspective, which enables the integration of multiple aspects of sustainability (e. g. ecological, environmental, economic and socio-cultural aspects; local, regional and global; past, present and future).

2.2. The dominant educational model and its alternative from the perspective of complete systems thinking

A key figure in the field of environmental education and sustainability, Stephen Sterling (2021, 2025), reviews UNESCO's efforts made over the last few decades² to rethink education traditionally nurtured by the modernist mechanistic worldview of

² Sterling's analysis focuses on two key UNESCO initiatives: the 2030 ESD Roadmap and the establishment of the International Commission on the Future of Education (Horizon 2050).

development and transform it in ways that generate ecological understanding. Based on Gregory Bateson's logical levels of learning, Sterling recognises a step up from the traditional model and places these efforts in an incipient phase of second-level learning on the Bateson scale.

The dominant educational model corresponds to a large extent to the first level or order, where most learning is seen as a predominantly cognitive process on sustainability that guides behaviours through solutions that do not question the existing paradigm of extractivist development and hyper-consumption, such as recycling (Sterling, 2003). This author describes the main features of the dominant model of education (2003):

- Emphasises formal education; is based on the idea of effective learning and the instrumental value of knowledge and people.
- Prepares people for economic life.
- Among its core values are selection (or exclusion), competition, specialisation, standardisation and faith in the system.
- Responsibility is understood as obligation, and socialisation is conceived as integration to fit into the *ethos*, assumptions and ways of working of the organisation or institution.
- Sustainability is understood as modernity. Instrumental rationalism, reductionism, determinism and predictability prevail, the one-way relationship between cause and effect, process linearity, a problem-solving orientation, and changes that do not alter the paradigm.
- In organisational terms, there is control from the vertical hierarchy.
- At the curricular level, the dominant educational paradigm is prescriptive, detailed and largely closed, centred on discursive knowledge that is often decontextualised and abstract.
- The evaluation is based on external and quantitative criteria. People's performance is regulated by reward, competition and accountability systems through targets and penalties.
- Physical structures and their management are not considered part of the learning experience, relationships with the local community are scarce and the synergies between content, process and context in generating learning are not considered.
- Learning is seen as product-oriented transmission, the technical role of teachers is emphasised and functional competencies are valued.
- The student is an individual cognitive being lacking knowledge and values. Intellect and logical and linguistic intelligences are prioritised.
- The learning/teaching experience is cognitive and is carried out through passive instruction, uncritical consultation, individual analytical research and a restricted range of methods.

- Learning is basic, simple, non-reflexive, causal. Knowledge is fixed and has a character of truth.

2.2.1. The ecological model of education: from mechanism/reductionism to *systemism*/holism

Education for sustainability “has been a critically important movement for change in educational thinking and practice [with] a flourishing of innovation at the levels of educational philosophy, curriculum, and pedagogy, drawing upon various indigenous and countercultural trends”, although these changes have mainly occurred outside of formally accredited education systems (Sterling et al., 2018, p. 324). From this movement, emerged an integrative theory that links humans and natural systems in relation to sustainability and sees the learner as a complete being: physical, intellectual, intuitive, ethical and spiritual (Sterling, 2003). This theory is the basis for a new model of education that relies on the ecological paradigm of whole-system or integral systems thinking. This model recovers aspects of educational thought such as the liberal humanism of Piaget, Dewey and Stenhouse among others; it transcends the tensions between behaviourism and constructivism, between universalism and relativism through the perception of *relationism* and *participativism* which can integrate idealism and realism (materialism), naturalism and positivism, and recognises the connection between perception and consciousness. In addition, this model carries Gregory Bateson’s concept of “*ecological mind*, wherein human cognition is not confined to the brain but extends into the environment through relational processes [and] feedback loops [that] connect mental, social, and ecological systems” (Yunibandhu & Hallinger, 2025, p. 9). The main features of the comprehensive ecological or systemic model of education are examined below, based on the analysis by Stephen Sterling (2003):

- Knowledge creation emerges from the synergy between content and process. “*What* we know, and *how* we know are mutually influencing” (p. 328).
- Preference is given to learning in real and localised contexts, as well as participatory inquiry and systemic coherence in the learning situation.
- The participatory methodology is considered as an integral approach. Learners will inevitably contribute to the meaning of sustainability from their own perspectives.
- There is a need to find a dynamic balance between the corrective interpretation of learning (behaviourism) and the interpretation of learning as construction of meaning (constructivism).
- Cognitive aspects have the same role as existential, ethical, affective and practical aspects. The basic principle is that everything is related to everything (*systemism*).

The Table 1 summarises the differences between the dominant educational model and the ecological one.

The ecological model generates second and third order learning on the Bateson scale and corresponds to a sustainable education because it goes beyond curricular

TABLE 1
DOMINANT MODEL AND THE ECOLOGICAL MODEL OF EDUCATION

Meanings	Dominant model (mechanistic)	Ecological model
Purpose of education	Preparation for <i>economic life</i>	Participation in all dimensions of the transition to sustainability: <i>social, economic, environmental</i>
Pedagogy	<i>Product-oriented pedagogy</i>	<i>Process, development and action-oriented pedagogy</i>
Learning	<i>Transmission</i> • Emphasis on teaching • Teachers as technical staff • Conveying meaning	<i>Transformation</i> • Integrative vision: teachers are also learners, learners are also teachers • Teachers as reflective staff and agents of change • Meaning is constructed and negotiated
Person	<i>Cognitive being</i> • Learning and teaching are cognitive experiences • Non-reflexive, causal learning	<i>Whole being with a full range of needs and capabilities</i> • Cognitive, affective, spiritual, manual and physical experiences • Reflective, iterative
Knowledge	<i>Instrumental value</i> • Decontextualised, abstract knowledge • Hermetic, disconnected from the surrounding environment	To be/to become (<i>intrinsic and instrumental value</i>) • Greater emphasis on local, personal, practical and first-hand knowledge • Borders diluted, the local community is increasingly part of the learning community
Curriculum	<i>Verticality, prescriptiveness (normativity)</i>	<i>Negotiation and consensus</i>
Process	<i>Top-down control</i>	<i>Democratic and participatory</i>
Socialisation	<i>Integration to fit in</i>	<i>Autonomy-in-relation</i>
Sustainability	Sustainability as <i>modernity</i>	Environmental sustainability (<i>complete systems</i>)
Sustainability education	Learning <i>about</i> sustainability	Learning <i>in</i> a sustainable way

Source: Authors own creation based on Sterling (2003)

content, addressing aspects related to the way of educating, educational processes and contexts in which it occurs (UNESCO, 2012). Cabezudo & Haavelsrud (2007, p. 288) highlight that “content becomes form, in a way form is the content. And both – acting as agents for change – have the powerful chance – the challenge – to transform contextual conditions”.

Whereas education for sustainability focuses on policies and practices, sustainable education focuses on the purpose, the very aim of the education for sustainability, its *ethos*, philosophy, assumptions, and culture (Sterling, s/f). If the purpose of education for sustainability is to cultivate transformative learning experiences that can heal, empower, energise, and unlock potential for the common good, then educational systems must undergo changes consistent with this *ethos* in order to sustain it (Sterling et al., 2018). Within the broader context of education, sustainability education is not a complement to sustainability or sustainable development. Because, as stated by the ecological educational model, the creation of knowledge emerges from the synergy between content and process. Focusing only on the content has the deficit of not respecting the needs, uniqueness and participatory role of the learner, while focusing only on the process is insufficient because it does not allow access to new ideas, to refine concepts and update (Sterling, 2003). “We need to be more aware of how and why we may value some knowledge above others, the importance of context to determining what is worth knowing or learning, and our constructive role in meaning-making” (p. 328). Moreover, unlike the dominant model of education (primarily transmissive or instructional and non-participatory), sustainable education is essentially transformative, constructive, and participative/democratic.

2.2.2. The key to educational transformation: transforming the foundational paradigm of education systems

Although the international education community and UNESCO initiatives recognise that the traditionally dominant model is not viable to generate sustainable futures, and that radical changes are needed, current efforts focus on educational policies and practices. At the same time, the Western education paradigm that generates dominant sets of assumptions, values, and beliefs that shape these policies and practices – and especially the purpose of education – is not adequately questioned (Sterling, 2021, 2025). Current efforts are therefore insufficient to bring about a substantial educational transformation. Realising the truly transformative potential of education to ensure sustainable futures requires transforming educational culture from a deep, systemism based ecological worldview. The success of this process lies in redefining the education model by integrating Stephen Sterling’s ecological model with the four ESD lenses discussed below.

The ESD Decade report identifies four perspectives or prisms that form the axial axes of the framework within which concrete versions of the model of education

for sustainable development are carried out in classrooms (Murga-Menoyo, 2015): a *holistic perspective* that prioritises training for relational thinking and, at the same time, integrating sustainability; a perspective that emphasises the *endogenous nature* of sustainable development: communities organise themselves to analyse and solve their own problems; a *critical approach* that challenges the dominant paradigm, and finally a *transformative prism* that seeks to transcend reality toward socially, economically, and ecologically sustainable ways of life.

Achieving the transformative purpose of ESD requires active citizen participation guided by a care ethics that complements the ethics of justice. An ethics whose most radical basis is found not so much in enlightened reason as in humanitarian reason and emotional intelligence, both expressed in social and ecological responsibility, intra- and intergenerational solidarity, and critical compassion (Murga-Menoyo, 2015).

The contextual nature of ESD means that the values, attitudes, skills and competences needed for sustainability are cultivated taking into account the specificities of the educational context and the influences it receives from the local, national, regional and global environment to which it belongs (UNESCO, 2014a). Consequently, the interactions between the four lenses refine the endogenous nature of ESD by harmonising problem-based learning with learning that is open to the diversity of knowledge about sustainability. Likewise, recognising and integrating the diversity of worldviews in a plural world is essential to a transformative education because, as Rabindranath Tagore and other thinkers reflected, when one form of knowledge is privileged, in fact a system of power is privileged. The future of education and development in today's world requires that dialogue between different worldviews to flourish with the aim of integrating knowledge systems originating from different realities and creating our common heritage (UNESCO, 2015).

3. EDUCATION FOR SUSTAINABLE CONSUMPTION

The idea of sustainable education translates into incorporating the issue of *quality education* as a main part of the discussion in ESD and the basic question that underlies it: what is the purpose of education: social reproduction or social transformation? (UNESCO, 2012). Likewise, the concept of *educational sustainability* appears, which is expressed through *curricular sustainability* (UNESCO, 2014b; Murga-Menoyo, 2015), the *sustainability of environments* (UNESCO, 2014b) and the *sustainability of learning processes* (Thorensen, 2005). For educational processes to be sustainable, they must instil principles and values of sustainable development through teaching practice (Murga-Menoyo, 2015); they have to be deployed in educational environments that are provided with appropriate facilities and equipment; and they need to be shaped by a culture of sustainable consumption of the educational institution (UNESCO, 2014b).

As Thorensen (2005) warns, learning requires a participatory and experiential methodology; situated (on concrete and significant cases); dynamic (focused

on tensions and dilemmas and how to address them), and oriented towards practice (action-reflection). Thus, education for sustainable consumption (ESC) adopts the theoretical perspective of situated learning developed by Lave & Wenger (1991). This perspective is based on the idea of situated cognition that stems from John Dewey's thinking about the role of the experiential dimension in creating meaning (Díaz Barriga, 2003). Through interactions in a given environment, meanings are negotiated, knowledge is constructed, capacities are developed, personal and collective identities are produced and transformed, and the projects from which communities of practice are born are filled with content. Additionally, according to the *Index for Inclusion* proposal (Ainskow, 2015), education is sustainable when it is inclusive. The meaning of inclusion here goes beyond the traditional concept of integration of people with functional diversity and it has to do with the process of increasing and maintaining the participation of all people in society, school or community simultaneously, seeking to reduce and eliminate all kinds of processes that lead to exclusion (Gutiérrez et al., 2014).

Consequently, a learning process is sustainable as long as it generates growing processes of participation, interaction, reflection, self-reflection and action; it focuses on the tensions and contradictions generated in the process through the pedagogy of dialogue (Freire & Faúndez, 1986; Thorensen, 2005), and allows the application of concepts and instruments to transform these tensions creatively and constructively (Galtung, 2003).

Bonil et al. (2012) use the term *environmentalisation* to designate different processes whose purpose is educational sustainability. They argue that the environmentalisation of schools responds to the integration of processes of:

- (i) structural environmentalisation, insofar as it is necessary to influence the sustainable management and operation of the school;
- (ii) citizen environmentalisation, which will emphasise establishing mechanisms for participation in and from the center, and
- (iii) curricular environmentalisation, which is committed to rethinking the teaching-learning process to find new ways of interpretation and action of the individual and the community.

3.1. *The role of peace education: consumption between care and social justice*

Education for peace is an education in values of peace (Cerdas, 2013) whose aims are social transformation (Cabezudo & Haavelsrud, 2007) and the construction of a culture of peace and sustainability (*Asia-Pacific Network for International Education and Values Education*, UNESCO, 2002). This definition has been linked to the ethics of care (Gilligan, 1982) since its principles have always been essential elements to maintain a certain ecological, historical and social balance. Noddings (2013) defends that education should focus on the relationship and attention to the

needs of each person; and the pedagogy of care, based on a holistic conceptualisation of peace, brings together the harmonious human development of all present and future humanity in organic interdependence with Nature (Fernández Herrería, 2015). As a result, care pedagogy places education for sustainable consumption at the nexus between education for peace and education for sustainable development. Two of the principles of the *Earth Charter* (UNESCO, 2000) illustrate this nexus and the central role of this pedagogy in ESC:

- a) the principle of interdependence which emphasises the inherent dignity of all human beings and the synergistic potential that this interdependence generates, as well as the intrinsic value of every form of life regardless of its usefulness to humans, and
- b) the value of non-violence and peace: peace is an integrated relationship of harmony with oneself, with other beings and cultures, and with the greater whole of which we are part.

ESD shares with peace education axiological foundations (values of peace and sustainability) and a transformative purpose (Cabezudo & Haavelsrud, 2007) guided by these values. This unity is rooted in the positive conceptualisation of peace in the 1960s, when the first steps were taken to guide peace research toward a broader agenda than the study of war. From the 1970s onwards, peace research efforts began to focus on the link between peace and development. For many researchers, including Johan Galtung, Adam Curle, and Betty Reardon, positive peace is related to human development and social justice (Lederach, 2007; Jares, 2005). The interdependence between peace and development was consolidated from the 1990s onwards, when the creative and non-violent transformation of conflicts was identified as the key to both peace and development.

At the nexus between peace and sustainable development is the alignment of consumer education with concerted efforts to transform our world. Traditional consumer education focuses on preparing people for their role as uncritical consumers: getting the best value for their money by making reasoned purchasing decisions, complaining when they see their economic interests affected, “taking action on behalf of other consumers, and appreciating how the economy works so they can function efficiently as a consumer agent” (McGregor, 2015, p. 7). This perspective was modified by the introduction of the values of peace education. For McGregor, the goal of consumer education is “human dignity, a sense of responsibility for each person in society, global unity and sharing”. Thus, the principles of consumer education should “prepare people to adhere to social values, including justice, tolerance, respect, solidarity, nonviolence, security, equality, and peace”.

This change in the purpose of consumer education has led UNESCO and the United Nations Environment Programme to emphasise in the Introduction to the jointly developed *YouthxChange. Handbook on Sustainable Consumption Education*, that sustainable consumption is an integral part of sustainable development and a topic of vital importance to the United Nations (UNESCO-UNEP, 2002). Indeed, the

2030 Agenda includes sustainable production and consumption as a priority area among the Sustainable Development Goals (Naciones Unidas, 2015), although implementation of this agenda is currently stalled and it is necessary to complement the conventional framework of sustainable development with a regenerative approach (Yunibandhu & Hallinger, 2025).

In its predatory facet, production and consumption manifest forms of *direct violence*, as is the case, for example, of aggressions and deaths related to the exploitation of conflictive minerals or rare earths (Álvarez & Trujillo, 2020; García de Madariaga et al., 2019), and has different expressions of *structural violence* (social fragmentation, exclusion, marginalisation, exploitation) that derive from asymmetric relationships between the purchasing power of individuals and social groups. The direct and structural violence that characterises consumerism is possible because of the symbolic violence rampant in aspects of culture that normalise the harmful effects of the dominant model of production, distribution, and consumption (Galtung, 2003).

The ESC aims to transform production and consumption patterns, that is, lifestyles and cultural patterns, to address current and future challenges of local communities and global citizens (UNESCO, 2014a). Micheletti & Stolle (2012) even discuss *sustainable citizenship*. One of the most significant aspects that sets this concept apart from the conventional notion of citizenship, is precisely the definition of a material dimension linked to production and consumption, which highlights the importance of economic relations and transactions for the development of a more sustainable world. The authors link this material dimension of sustainable citizenship with a reflective dimension –to raise awareness of how the past and present actions can affect the future– and with a spatial dimension that involves extending responsibility beyond the immediate environment to people and biodiversity across the globe.

4. CONCLUSIONS

The evolution of the holistic perspective in ESD compels us to continually redefine the boundaries of the concept of development as formulated within the ontological frameworks of modernity, highlighting its androcentric and Eurocentric biases, and addressing the nature of human and planetary interdependence in a broad sense (Escobar, 2014).

The challenges of sustainable human development interpellate both Citizenship and human activities relating to production and consumption, and are fundamentally linked to the achievement of an acceptable quality of life for everyone. In line with the prisms of ESD, we must think about ESC in an emancipatory key so that people can meet their basic needs in an appropriate manner, that is, through the organic interconnection between human beings, their culture and creations, and Nature. Corroborated with its endogenous, holistic nature and critical perspective, this means that the purpose of ESC is to cultivate, in a situated manner, the capacity to address people's genuine needs by integrating the various dimensions of sustainability and

in harmony with the socio-ecological system of which they are part (Capra, 1998; Gallopín, 2003; du Plessis, 2012).

To achieve its transformative purpose, the ESC must cultivate ecological minds capable of a regenerative culture, that is, “a way of being, thinking, and acting that supports regenerative development by fostering the co-evolution of human and natural systems” (Yunibandhu & Hallinger, 2025, p. 2). A regenerative mindset is characterised by *mutualism* that fosters mutually beneficial relationships, *diversity* that means valuing different perspectives and approaches, *reflexivity* that implies “continuous self-awareness and adaptability”, and *agency capacity* that concerns “empowering individuals (and organizations) to act purposefully and intentionally to support their goals for meaningful change”. Finally, this regenerative mindset is capable of *holism* that promotes “a vision of systems as interconnected ecological wholes, where actions have far-reaching effects”.

The challenges facing education today (UNESCO, 2022) demand creating conditions that favour a substantive democracy, non-commodified, and guided by an ethic of recognition, civic action, and planetary responsibility. In this sense, the ESC –both in its consumption dimension and in the sphere of production of goods and services, as well as the mediation between these two spheres– must be configured as a potential space for effective transformation, creation and resistance.

As an educational, ethical and political initiative aimed at the development of genuinely inclusive learning, ESC can assume a central role by addressing concepts and pedagogical practices in a transversal way. To this end, it is essential to embed educational structures, processes and stakeholders at all levels, particularly those involved in fostering an understanding of peace, social justice, environmental sustainability and human rights. To move in this direction, it is essential to deepen the relationships between the ethics of justice and the ethics of care, with the purpose of articulating a system capable of translating values such as compassion, interdependence, and responsibility into normative and policy principles oriented toward social justice and ecology. Along these lines, we propose as a path to the future, a deepening of the post-development perspective and a reconceptualisation of ESC that allows us to blur the boundaries between public and private spheres, justice and care, culture and nature, as well as between rationality and affectivity, in order to contribute to a truly inclusive and emancipatory education.

REFERENCES

- Ainscow, M. (2015). *Struggles for Equity in Education: The selected works of Mel Ainscow*. Routledge. <https://doi.org/10.4324/9781315688213>
- Alessiato, E. (2022). What is a Worldview? Some Suggestions from the History of the Concept. *Negotiation Journal*, 38(6), 397–404 <https://doi.org/10.1111/nejo.12404>

- Álvarez, C. E., & Trujillo, J. H. (2020). Geopolítica de las tierras raras: un recurso natural estratégico para la seguridad multidimensional del Estado. *Revista Científica General José María Córdova*, 18(30), 335-355. <https://doi.org/10.21830/19006586.587>
- Bonil, J., Calafell, G., Granados, J., Junyent, M., & Tarín, R. M. (2012). Un modelo formativo para avanzar en la ambientalización curricular. *Profesorado. Revista de Curriculum y Formación de Profesorado*, 16(2), 145-163. <https://revistaseug.ugr.es/index.php/profesorado/article/view/19924>
- Cabezudo, A., & Haavelsrud, M. (2007). Rethinking peace education. En Ch. Webel, & J. Galtung (Eds.), *Handbook of Peace and Conflict Studies* (pp. 279-296). Routledge. <https://dx.doi.org/10.7238/joc.v4i1.1521>
- Capra, F. (1998). *La trama de la vida. Una nueva perspectiva de los sistemas vivos*. Anagrama.
- Cerdas, E. (2013). Educación para la paz: Fundamentos teóricos, epistemológicos y axiológicos. *Revista Latinoamericana de Derechos Humanos*, 24(1-2). <https://www.revistas.una.ac.cr/index.php/derechoshumanos/article/view/5804>
- Cole, R. J. (2012). Regenerative design and development: current theory and practice. *Building Research & Information*, 40(1), 1-6. <https://doi.org/10.1080/09613218.2012.617516>
- Danesh, H. B. (2006). Towards an integrative theory of peace education. *Journal of Peace Education*, 3(1), 55-78. <https://doi.org/10.1080/17400200500532151>
- Danesh, H. B. (2008). Unity-Based Peace Education. En M. Bajaj (Ed.), *Encyclopedia of Peace Education* (pp. 147-156). Age Publishing, Inc. <https://doi.org/10.1108/978-1-60752-861-620251022>
- Díaz Barriga, F. (2003). Cognición situada y estrategias para el aprendizaje significativo. *Revista Electrónica de Investigación Educativa*, 5(2), 105-117. <https://redie.uabc.mx/redie/article/view/85>
- du Plessis, C. (2012). Towards a regenerative paradigm for the built environment. *Building Research & Information*, 40(1), 7-22. <https://doi.org/10.1080/09613218.2012.628548>
- Escobar, A. (2014). *Sentipensar con la tierra: Nuevas lecturas sobre desarrollo, territorio y diferencia*. UNAULA.
- Fernández Herrería, A. (2015). El concepto de paz. Una propuesta de reconstrucción. En A. Soriano, & M. Bedman (Coords.), *Temas de Pedagogía Social - Educación Social* (pp. 89-127). Universidad de Granada.
- Freire, P. (2007). *Pedagogía del oprimido*. Siglo XXI.
- Freire, P., & Faúndez, A. (1986). *Hacia una pedagogía de la pregunta. Conversaciones con Antonio Faúndez*. La Aurora.
- Gallopín, G. (2003). *Sostenibilidad y desarrollo sostenible: un enfoque sistémico*. Naciones Unidas. Cepal. <https://hdl.handle.net/11362/5763>
- Galtung, J. (2003). *Paz por medios pacíficos. Paz y conflicto, desarrollo y civilización*. Bakeaz. <https://www.gernikagoratur.org/portfolio-item/paz-medios-pacificos-conflicto-johan-galtung/>
- García de Madariaga, J. M., Tucho, F., González de Eusebio, J., & Vicente, M. (2019). Concienciar en sostenibilidad tecnológica: experiencias comunicativas y educativas en España para un uso sostenible de las TIC. *Commons. Revista de Comunicación y Ciudadanía Digital*, 8(2), 41-79. <https://dx.doi.org/10.25267/COMMONS.2019.v8.i2.02>

- Gilligan, C. (1982). *In a different voice: psychological theory and women's development*. Harvard University Press.
- Gladwin, T. N., Newberry, W. E., & Reiskin, E. D. (1997). Why is the northern elite mind biased against community, the environment, and a sustainable future? En H. Bazerman, D. M. Messick, A. E. Tenbrunsel, & K. A. Wade-Benzoni (Eds.), *Environment, Ethics, and Behaviour* (pp. 234–227). New Lexington.
- Gutiérrez, M., Martín, M. A. V., & Jenaro, C. (2014). El Index para la inclusión: presencia, aprendizaje y participación. *Revista Nacional e Internacional de Educación Inclusiva*, 7(3), 186-720. <https://revistaeducacioninclusiva.es/index.php/REI/article/view/139>
- Haraway, D. (2016). *Staying with the trouble. Making Kin in the Chthulucene*. Duke University Press <https://doi.org/10.1215/9780822373780>
- Jares, X. (2005). *Educación para la Paz. Su teoría y su práctica*. Editorial Popular.
- Lave, J., & Wenger, E. (1991). *Situated Learning. Legitimate Peripheral Participation*. Cambridge University Press.
- Lederach, J. P. (2007). *La imaginación moral. El arte y el alma de la construcción de la paz*. Bakeak. <https://share.google/fegPd5Oefe30k93Ie>
- Leff, E. (2013). *Educación ambiental y filosofía de vida. Conferencia magistral en la Universidad de Guanajuato*. México. https://www.youtube.com/watch?v=z_9clHuKYgg
- McGregor, S. L. T. (2009). Reorienting consumer education using social learning theory: sustainable development via authentic consumer pedagogy. *International Journal of Consumer Studies*, 33, 258-266. <https://doi.org/10.1111/j.1470-6431.2009.00766.x>
- McGregor, S. L. T. (2015). Framing consumer education conceptual innovations as consumer activism. *International Journal of Consumer Studies*, 40, 35-47. <https://doi.org/10.1111/ijcs.12208>
- Micheletti, M., & Stolle, D. (2012). Sustainable Citizenship and the New Politics of Consumption. *Annals AAPSS*, 644, 88-120. <https://doi.org/10.1177/0002716212454836>
- Morin, E. (1999). *Los siete saberes necesarios para la educación del futuro*. UNESCO.
- Moliner, O. (Ed.) (2020). *Acompañar la inclusión escolar*. Dykinson.
- Murga-Menoyo, M. A. (2015). Competencias para el desarrollo sostenible: las capacidades, actitudes y valores meta de la educación en el marco de la Agenda global post-2015. *Foro de Educación*, 13(19), 55-83. <https://doi.org/10.14516/fde.2015.013.019.004>
- Naciones Unidas. (1987). *Informe de la Comisión Mundial sobre el Medio Ambiente y el Desarrollo. "Nuestro futuro común"*. Asamblea General de las Naciones Unidas. <https://research.un.org/es/docs/environment/conferences>
- Naciones Unidas. (2002). *Informe de la Cumbre Mundial sobre el Desarrollo Sostenible Johannesburgo (Sudáfrica) (Rio + 10)*. <https://www.un.org/es/conferences/environment/johannesburg2002>
- Naciones Unidas. (2015). *Transformar nuestro mundo: la Agenda 2030 para el Desarrollo Sostenible*. Asamblea General de las Naciones Unidas. <https://share.google/0CSsRSn-Qs4qij8kqx>
- Noddings, N. (2013). *Caring: A Relational Approach to Ethics and Moral Education*. University of California Press.
- Novo, M. (2009). La educación ambiental, una genuina educación para el desarrollo sostenible. *Revista de Educación, número extraordinario*, 195-217. <https://www.educacionfpy->

- deportes.gob.es/revista-de-educacion/numeros-revista-educacion/numeros-anteriores/2009/re2009/re2009-9.html
- Reed, B. (2007). Shifting from 'sustainability' to regeneration. *Building Research & Information*, 35(6), 674-680. <https://doi.org/10.1080/09613210701475753>
- Saura, P., & Hernández Prados, Ma. A. (2008). La evolución del concepto de sostenibilidad en la educación ambiental. *Teoría educativa*, 20, 179-204. <https://doi.org/10.14201/989>
- Sen, A. (2000). El desarrollo como libertad. *Gaceta Ecológica*, 55, 14-20. <https://www.redalyc.org/articulo.oa?id=53905501>
- Sterling, S. (s/f). Key ideas: bite-sized Sterling. *Sustainable Education*. <https://www.sustainableeducation.co.uk/key-ideas/>.
- Sterling, S. (2003). *Whole System Thinking as a Basis for Paradigm Change in Education. Explorations in the Context of Sustainability*. University of Bath.
- Sterling, S. (2021). Concern, Conception, and Consequence: Re-thinking the Paradigm of Higher Education in Dangerous Times. *Frontiers in Sustainability*, 2. <https://doi.org/10.3389/frsus.2021.743806>
- Sterling, S. (2025). Truly Transformative? Why ESD Falls Short in Epochal Times. *Journal of Education for Sustainable Development*, 19(2), 235-247. <https://journals.sagepub.com/doi/10.1177/09734082251336543>
- Sterling, S., Dawson, J., & Warwick, P. (2018). Transforming Sustainability Education at the Creative Edge of the Mainstream: A Case Study of Schumacher College. *Journal of Transformative Education*, 16(4), 323-343. <https://doi.org/10.1177/1541344618784375>
- Thorensen, V. (Ed.) (2005). *Consumer citizenship education*. The Consumer Citizenship Network 2005.
- UNESCO. (2000). *Carta de la Tierra*. <https://cartadelatierra.org/lea-la-carta-de-la-tierra/>
- UNESCO. (2002). *Learning to be: A holistic and integrated approach to values education for human development: Core values and the valuing process for developing innovative practices for values education toward international understanding and a culture of peace*. Asia-Pacific Network for International Education and Values Education. <https://unesdoc.unesco.org/ark:/48223/pf0000127914>
- UNESCO. (2006). *Framework for the UN DESD International Implementation Scheme*. Division for the Promotion of Quality Education. <https://unesdoc.unesco.org/ark:/48223/pf0000148650>
- UNESCO. (2012). *Forjar la educación del mañana. Decenio de las Naciones Unidas de la Educación para el Desarrollo Sostenible*. <https://unesdoc.unesco.org/ark:/48223/pf0000219155>
- UNESCO. (2014a). *Declaración de Aichi-Nagoya sobre la Educación para el Desarrollo Sostenible*. Conferencia Mundial Aichi-Nagoya (Japón). https://unesdoc.unesco.org/ark:/48223/pf0000231074_spa
- UNESCO. (2014b). *Hoja de ruta para la ejecución del programa de acción mundial de Educación para el Desarrollo Sostenible*. https://unesdoc.unesco.org/ark:/48223/pf0000230514_spa
- UNESCO. (2015). *Replantear la Educación. ¿Hacia un bien común mundial?* <https://unesdoc.unesco.org/ark:/48223/pf0000232697>

- UNESCO. (2022). *Reimaginar juntos nuestros futuros. Un nuevo contrato social para la educación*. https://unesdoc.unesco.org/ark:/48223/pf0000379381_spa
- UNESCO-UNEP. (2002). *Youth x Change. Manual de Educación para un Consumo Sostenible*. ISBN 92-807-2128-3.
- Yunibandhu, R., & Hallinger, F. (2025). From Sustainability to Regeneration: Mapping the Conceptual Foundations and Future Directions of Regenerative Development. *Sustainable Development*, 1–17. <https://doi.org/10.1002/sd.70112>