



## Article

# The Teachability of Global Citizenship to Children through Empirical Environmental Education: Reflections from a Horticultural Project in a Spanish School

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**Abstract:** In a context defined by the internationalisation of educational policies and the supranational nature of school programmes, we highlight the desirability of promoting local strategies for teaching environmental sustainability in order to contribute to the formation of global citizenship in children. Based on the experience of a horticultural curricular project in a school in northern Spain, the aim of this article is to reflect on the need for socio-educational communities to transform the objectives of environmental education into tools with which children can co-responsibly build connections to modify or enrich their everyday concepts of caring for the planet. To do this, semiotic analysis of different official school documents is used as a key methodology. Our findings invite consideration of the fact that pedagogies designed to train children in global citizenship competencies should not be limited to the classroom or to reproducing the proposals of institutional documents. Rather, they should be based on the prior knowledge and experiences of all members of the community, above all, of the children. From this perspective, the promotion of empirical learning situations is essential for the acquisition of meaningful and appropriate environmental contents, in the sense that they allow children, as future global citizens, to recognise the ethical repercussions of their own actions and decisions.

**Keywords:** childhood; education for global citizenship; environmental education; participatory experiences; curricular project; Spain



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## 1. Introduction

Our starting point is the internationalisation of educational policies and the supranational character of school programmes. Alongside many other factors, these favour the mobilisation of human and material resources which aim to introduce educational experiences that help to ensure a sustainable future. These resources, in a variety of ways, provide instruction through the interaction of the students with their environment (Aikens et al. 2016). Many and varied documents are produced by supranational bodies to this end. These documents have the capacity to validate certain kinds of knowledge and, therefore, legitimise some (and not other) learning objectives and aims. These are then transformed into competencies, justifications, approaches, methodologies, and evaluation tools relating to pedagogical processes in socio-educational communities. This is not just limited to educating on a basic level; it also encompasses the idea of environmental learning and, later, that of sustainable development (Scott and Vare 2021).

A salient and relatively recent example of this is the document “Transforming our World: The 2030 Agenda for Sustainable Development” (United Nations 2015), which, with its integrated and indivisible 17 objectives and 169 targets—covering areas of economic, social, and environmental concerns—has positioned itself in discourse (and also in practice) as a guide for the design of school curricula and teaching throughout the world at all educational stages. Education for sustainable development (ESD) arose in the late 1980s alongside the concept of sustainable development. The Brundtland Commission produced

the document “Our Common Future” (United Nations 1987), which articulated the need to encourage people in sustainable practices. Subsequently, UNESCO (2005) drafted the declaration “United Nations Decade of Education for Sustainable Development 2005–2014” in which key elements for learning from the perspective of sustainable development were put forward. This declaration proposes the promotion of a solidarity-based education that can contribute to an accurate perception of the state of the world, capable of generating responsible attitudes and commitments and preparing citizens for informed decision-making aimed at achieving culturally plural, socially just, and ecologically sustainable development, a perception that transcends classic anthropocentric positions and is oriented towards the search for more comprehensive and intelligent models of interaction with eco-systems (Alba-Hidalgo et al. 2018).

The points that can be specifically linked to ESD and Global Citizenship Education (GCED) are the Sustainable Development Goal 4 of the 2030 Agenda and its target 4.7. This goal seeks to ensure that, by 2030, students are acquiring not only theoretical but also practical knowledge that enables them to promote sustainable development through the adoption of sustainable lifestyles, human rights, gender equality, the promotion of a culture of peace and non-violence, global citizenship, and an appreciation of cultural diversity and the contribution of culture to sustainable development (United Nations 2015). The importance of educating new generations in matters of sustainable development is undeniable. However, we believe that it is essential to discuss the need to link these concepts to social and pedagogical critiques, that is, to question common ideas and practices of development, and also to call for an effort of commitment and transformation in the ways that more equitable relationships are built with eco-social environments. (Sauvé 1996; Sauvé and Goffin 1999).

Prior to ESD, since the end of the last century, the concept of environmental education (EE) was already being highlighted in international forums. Educators such as Giordan and Souchon (1991) and Hungerford and Volk (2013) proposed models for intervention in EE that were based on learning problem-solving processes and skills for environmental management in the framework of a scientific and technological education that is open to social realities and aimed at changing citizens’ behaviour. These initial approaches did not include critical reflections relating to the dominant paradigm of the production and excessive consumption of natural resources. From a critical perspective, these educational models must include environmental issues on an equal footing with issues of the physical environment, economic and social inequalities, quality of life, and all social aspects of development. As such, EE and ESD cannot be considered as accessories to education but rather as paradigms that reflect upon the limits and conditioning of the planet and the search for a dignified and sustainable life for all human beings (Murga-Menoyo and Novo 2014).

Aligning the school curriculum with paradigms for sustainability is not the same as introducing environmental content into the classroom; it supposes the development of pedagogies that allow for critical reflections on the interrelationships between environmental, social, and economic aspects (Scalabrino et al. 2022). In other words, this process of curricular adaptation not only affects conceptual content but also embraces the procedural and attitudinal fields. Thus, the introduction of sustainable pedagogies into the curriculum does not only consist of including content relating to sustainability in the syllabus of some subjects but also a change in the educational system that affects the teaching-learning process (Gil-Pérez and Vilches 2023). For this reason, notwithstanding our recognition of the importance of discourses such as that of Agenda 2030 to establish the intentions of educational policies, it is in reality the sum of the features of educational projects carried out in schools and the active participation of the members of educational communities that are going to promote routes that favour the acquisition of specific content through encouraging situations of empirical, meaningful, and contextualised learning (Probst 2022).

In this context, based on the experience of a horticultural curricular project (AFA 2012) in a school called Altamira in the autonomous region of Cantabria in northern Spain, the

aim of this article is to highlight the appropriateness of educational experiences in environmental sustainability as a means of contributing to the creation of global citizenship, since these experiences not only include options for ecologically and socially responsible relationships or sustainable forms of consumption but also bring about actions and decisions of stewardship in the transformation of the world, from the early stages of schooling (Piazza 2021). That is, we offer a review of the usefulness of promoting situations of empirical learning—personal, participative, and reflective—for the acquisition of meaningful and appropriate environmental content for early childhood that also gives priority to recognising the ethical repercussions of children’s own actions and decisions as future global citizens (Hart 2008; Hayward 2012).

To this end, semiotic analysis of different official school documents is used as a key methodology. In particular, we analysed the horticultural project El Huerto (The Allotment), observing its origins as a complementary activity and its direct relationship with the school’s pedagogical principles as factors that facilitate its permanence and, above all, its incorporation into the teaching syllabuses of the infant stage and the first years of primary school in this educational centre. Our findings invite consideration of the need for socio-educational communities to transform the EE and ESD objectives into tools with which children can share responsibility for building connections to modify or enrich their day-to-day concepts concerning the care of the planet. This analysis of the official curricular documents led us to the conclusion that pedagogies designed for an education in global citizenship competencies should not be limited to the classroom or to reproducing the proposals of institutional documents but should instead be based on the knowledge and previous experiences of all members of the community; above all, the children. From this perspective, promoting situations for empirical learning is vital for the acquisition of meaningful and appropriate environmental content, in the sense that it allows children, as future global citizens, to recognise the ethical repercussions of their own actions and decisions.

## 2. Materials and Methods

This research uses, as a fundamental methodological strategy, the semiotic analysis associated with the Depth Hermeneutics put forward by Thompson (1991). It is a tool that facilitates observation of the organisation of the symbolic forms (features, patterns, and structural relationships) that any type of document is made up of. Specifically, semiotic analysis allows for the identification of the chains of reasoning through which discourse is constructed and the way that this reveals the values (ideology) that underpin, in this case, an official school syllabus. This type of document is understood to be a symbolic form with the capacity to reflect certain dominant cultural paradigms, including those prioritised by the ideology of these same documents. It also reflects the presence of an underlying political–ideological component in an educational project. The particularity of Thompson’s study on ideology lies in the identification of the ways in which meaning is constructed and transmitted through symbolic forms and how this serves to maintain lasting systemic power relationships. Symbolic forms constitute a wide range of actions and languages, images, and texts produced by subjects and recognised by them and others as meaningful constructors.

Specifically, ideology operates through five modes of operation that relate to each other in particular circumstances: legitimisation, simulation, unification, fragmentation, and commodification (Thompson 1991). In the case of the present research, we exclusively developed the mode of legitimisation which, in turn, has three typical strategies of symbolic operation: rationalisation, universalisation, and narrativization (Table 1). Legitimation can be achieved by appealing to rational, traditional, or charismatic fundamentals that are generally expressed through language. For this reason, we have highlighted relevant passages from Cantabria’s curricula, including some from the selected school, in which rational arguments are presented as a means of legitimising and validating specific values and principles as an ideological strategy.

**Table 1.** Typical legitimation strategies.

Strategy	Short Definition
Rationalisation	The producer of a symbolic form constructs a chain of reasoning that seeks to defend or justify a set of social or institutional relations and, in so doing, persuade an audience.
Universalisation	Made up of institutional structures that serve the interests of some individuals who present themselves as serving the interests of all.
Narrativization	The retelling of the memory of the past that is narrated in the present as part of an immemorial and valued tradition. <sup>1</sup>

<sup>1</sup> Source: Thompson (1991).

In particular, the concepts of EE and ESD are addressed as symbolic representations with a wide-ranging capacity to promote not only a particular type of knowledge but, above all, a culture of school-based co-existence (Casmana et al. 2023). It is recognised that these concepts fortify the school curriculum and are, therefore, a regulating element of the process of the production, reproduction, and distribution of knowledge. In practice, we are talking about social interactions that allow the educational community to develop its own culture of sustainable development (Hiwaki 2014). In other words, it is a set of socio-cultural experiences (which take place in specific educational contexts) that will lead to achieving Sustainable Development Goals.

In this context, we carried out an observational exercise of different official school documents, emphasising groups of statements where the legitimation strategies (rationalisation, universalisation, and narrativization) identified by Thompson (1991) coalesce. For the sake of greater clarity, we present our observations from three angles: contextual, organisational, and socio-cultural. The contextual aspect covers the teaching strategies related to EE and ESD that are present in the official school syllabus of the autonomous region of Cantabria for the infant and primary stages. Then, we analyse the contents of the centre's educational project, which includes its values, educational aims, and methodology, and those of the specific project relating to the work in the allotment located on the school's grounds. Particularly, on an organisational level, we highlight the discourses whereby principles, values, and norms justify and organise the school's contents. Lastly, on a socio-cultural level, we identify the elements associated with the school culture and the daily life of the horticultural project.

### 3. Results

The analysis of official documents that create the framework of academic content supposes the consideration of ideas, assumptions, commitments, and conflicts that are not necessarily clearly related to one another but which as a whole reflect their importance as a regulating element in the process of the production, reproduction, and distribution of knowledge (Dreeben 2006). Thus, through studying and interpreting institutional discourses that contribute to producing and reproducing specific knowledge, skills, or abilities in school contexts, their symbolic value and ability to influence the design of teaching programmes are recognised (Ramírez 2016). Therefore, for the purpose of analysing and interpreting the selected texts, we have italicised the elements that are fundamental in constructing the mode of operation of legitimation.

#### 3.1. Contextual Aspect: The Official School Syllabus of Cantabria

In this subsection, we identify explicit statements that, in the form of rational arguments, seek to legitimise or validate the concepts of EE and ESD in two official documents of the autonomous region of Cantabria: the School Programme, Efficient? Naturally! (Gobierno de Cantabria 2023) and the Ecological Programme of School Allotments and Gardens (Gobierno de Cantabria 2007), both published by the Council for Education, Culture and Sport.

The first of the documents is aimed at schools, and among its objectives are that of “being a participatory tool with which to encourage the greening of school curricula and the schools themselves through *educational practices* that involve *commitments and actions* in favour of sustainable development” (A1—Universalisation strategy) (Gobierno de Cantabria 2023).

It is interesting at this point to highlight the document’s own justification for incorporating elements of EE and ESD into schools: “*We are conscious* of the current problems of the planet: the unsustainability of the present-day system based on fossil fuels and high energy demand, the increase in world population, the loss of biodiversity, community breakdown, etc. Therefore, from an early age, there is a fundamental need for *the creation of habits* that promote *the nurturing of a critical awareness* of the impacts of human activity on the environment, *with the objective* of improving our abilities to contribute to solving environmental issues” (A2—Rationalisation Strategy) (Gobierno de Cantabria 2023).

More specifically, concerning the ESD-related programme of activities, it establishes that the objective must be “to guarantee a *model of education* that is integrated, global, permanent and enshrined in *education in values*”. It goes on to point out that only the joint training and planning of all public and private bodies can give rise to “*new ideas that improve* the social and environmental context.” (A3—Rationalisation strategy) (Gobierno de Cantabria 2023).

The second document analysed in this contextual aspect is the Ecological Programme of School Allotments and Gardens (Gobierno de Cantabria 2007). There are other institutional programmes of the Government of Cantabria’s Council of Education, Culture and Sport that seek to stimulate EE, such as School Agenda 21 (Gobierno de Cantabria 2024) and Sustainable Centres (Official Bulletin of Cantabria—BOC 2005). However, the allotment programme was chosen due to its stronger connection to the case study. It is an institutional programme of Education for Sustainability that seeks to be “a basic and core conception of the environment”. Following Article 45 of the Spanish Constitution, its starting point is that “*we all have the right to enjoy an environment that is suitable* for our personal and social development, and the *duty to preserve it*” (A4—Universalisation strategy). It justifies its creation by pointing out that the programme is “consistent with the conception of the *modern school*, since it is committed to the active building of knowledge, to meaningful learning, where *the contents are dynamic and changing, learning takes place in different contexts as well as school and the family, and where the protagonist is the student*” (A5—Universalisation strategy) (Gobierno de Cantabria 2007).

The explicit objective of the Ecological Programme of School Allotments and Gardens is to nurture “an education for sustainability *aimed at improving capacities of analysis, reflection and action*, which lasts a lifetime and is a two-way street, where each person teaches and learns at the same time, *a programme which can and should be developed everywhere, at school, at home, in the neighbourhood. . .*, and which seeks commitments to the resolution of problems” (A6—Universalisation strategy). In addition, the document goes into greater depth about the idea that the programme must be “a meeting *place* from where to develop solidarity *with the present and with the future*, one that promotes an awakening of awareness to the consequences of our actions, and encourages shared work, co-operation and co-learning” (A7—Narrativization strategy) (Gobierno de Cantabria 2007).

At this point, having highlighted the paragraphs containing discourse that legitimises EE and ESD in the documents under analysis, we can assert that there is a prevalence of broad, universalist, and standardised statements and pronouncements in relation to education and environmental issues. These highlight arguments as to the need to train students in these matters and that the learning be meaningful. However, they do not consider either the economic, social, or cultural development of specific contexts (Murga-Menoyo and Novo 2014; Scalabrino et al. 2022).



### 3.2. Organisational Aspect

In this section, we review two documents at the level of the organisation of the school under analysis. On the one hand, we review the text that contains the Educational Project of the Centre—EPC (Colegio Altamira 2024) and, specifically, the parts that explain its values, educational aims, and methodology. On the other, we examine the document that lists the characteristics of the school's horticultural project (AFA 2012), in force since the 2012–2013 school year. Both texts are analysed as discourses in which principles, values, and norms are manifested that justify and organise school contents, both from a pedagogical–organisational perspective and a socio-cultural perspective (Thompson 1991).

#### 3.2.1. The Educational Project of the Centre (EPC)

The educational project is the expression and implementation of the formative ideals, expectations, and interests of the life of a school (Kirk et al. 2017). In the particular case that we are working with, the segments “Our Educational Purposes” and “Methodology” were identified in the EPC in order to identify its pedagogical principles. The EPC makes three basic commitments: an “active” teaching–learning methodology; “habits (...) consistent with maintaining and restoring the ecological equilibrium” (A8—Rationalisation strategy); and a context that favours “the contributions of all the people” who make up part of the socio-educational community (A9—Universalisation strategy) (Colegio Altamira 2024).

#### 3.2.2. Horticultural Project

The educational project El Huerto began in 2012 as a result of the interest of a group of families at the school, and since then, it has been a complementary activity promoted and financed by the representative body of pupils' families, which goes by the name of AFA (Association of Families of Altamira). It uses the school's spaces and forms part of its teaching programmes. It starts as an “extracurricular activity” which takes place mainly within school hours and is aimed at all children at the infant and first stage of primary level. Its explicit objective has not changed since its creation and it is: “to place experiences relating to the natural environment and the production of food at the reach of children” (AFA 2012).

The document itself relates the origins of the project, highlighting that it was promoted “with the participation of a few parents, teachers' support, and the help of children in the first years of school. It was born with the mission of being ongoing and that it be the children themselves who take the lead, who make the main decisions, organise, and plan the work of the allotment, and who oversee the harvests and receive the benefits of the allotment. The food produced by the allotment will be for the children” (A10—Narrativization strategy) (AFA 2012).

The document's account goes on to list the “horticultural and educational” objectives. Firstly, the intention is that the allotment does not “turn into an isolated extracurricular activity, but rather that we attempt to have it integrate many cross-sectional aspects such as food, waste, recycling, equality and solidarity with other people and the planet”. Secondly, it is considered that the allotment “offers an incredible opportunity to acquire, develop, reinforce, and share knowledge in a practical and direct way so that children can see the results of their work, their observations, and their decisions. On the other hand, the school allotment is an exceptional teaching resource for different areas of knowledge, especially for Knowledge of the Environment and the Natural and Social Sciences” (A11—Rationalisation strategy) (AFA 2012).

After enumerating the objectives, the document takes pains to define the horticultural project in a detailed way: “The allotment is a teaching proposal that seeks to facilitate knowledge of the natural environment and the production of food in such a way that children learn to relate to the environment in a respectful manner and to keep its disturbance to a minimum, as well as encouraging them to value the qualities of sustainably produced food”. It goes on to stress that the usage of the allotment must be understood as “a teaching resource through which the students come face-to-face with our relationships of dependence with the natural environment, the nutrient cycle, and the production of food, facilitating the acquisition of

habits and attitudes of care and responsibility for the environment" (A12—Rationalisation strategy) (AFA 2012).

Finally, the document addresses the academic justification of the project, highlighting that this "also contributes to the acquisition of *values that are the very essence of the school*" (A13—Universalisation strategy). More specifically, the proposal "is to share out the allotment-related tasks by school years, based on the *knowledge and competencies* already obtained and those that should be acquired during the school year. In this way, all children will carry out necessary tasks so that *the allotment project functions practically autonomously*". As well, "in the allotment, teachers can find a *work tool*, whether it is as a *practical and accessible example of almost any academic content*, or as a way to lead students in learning instead of instructing them" (A14—Rationalisation strategy) (AFA 2012).

After having reviewed the school's documents in its organisational aspect, we established that the horticultural project is a complementary educational activity that is compulsory, fun, instructive, and educational. It has its place in the teaching programmes and uses the school's spaces. On seeking to complement programmed learning through active methods and experimental resources, it becomes a privileged space in which to introduce teaching innovations. At the same time, the discursive scaffolding that calls for the shared responsibility of the three main socio-educational actors: the student body, the teaching staff, and families, is highlighted (Piazza 2021).

### 3.3. Socio-Cultural Aspect

This section seeks to identify the socio-cultural elements (school culture and everyday life) that justify the horticultural educational project. The document of the horticultural project establishes that, "in the allotment, *culture and daily life come together and through it the relationships established between our model of consumption, our health and their interactions with the environment are revealed*, issues that can facilitate useful learning for children's development outside of the educational framework" (A15—Rationalisation strategy) (AFA 2012).

Emphasis is placed on the fact that the management of the allotment cannot be contemplated as a mere administrative process but rather that it is necessary to identify the actions that the management team, teachers, and the AFA take to ensure the effectiveness of the project, "which is a huge task undertaken by a few volunteers in their free time". In fact, "we want *the management to be participative, democratic and horizontal*, renouncing the idea that it is only one person or small group who make all the decisions and assume responsibility, in the process reducing children and volunteers to the role of mere helpers". In short, it goes into greater depth about the intention "that the allotment, little by little, practically reaches a point of *self-management*, where *the children are the protagonists* and feel that the allotment is theirs, *that they make decisions and carry out a significant part of the tasks* with the support of parents and teachers, and where the routine jobs are done automatically, as just another school activity" (A16—Rationalisation strategy) (AFA 2012).

These contents undeniably posit that the horticultural project has a long tradition of participation of the socio-educational actors and, in a significant way, families. This positions its representative body as an agent of change and as having the ability to influence the design of teaching programmes (Siregar and Quimbo 2016). In this context, having listed the statements of the studied documents, we move on to our interpretation, the third and final phase of Thompson's depth hermeneutical approach (Thompson 1991).

## 4. Discussion

Interpretation is understood as the process that allows one to observe the relationship between discursive strategies and the context of their enunciation, that is, a possible meaning of the ideological–discursive constructions projected in the selected texts, with the objective of understanding how legitimisation strategies work in their function of justifying relevance—in this case, that of the educational project of the school being studied. For this purpose, it is understood that discourse enables, justifies, and transforms social relations

and even drives actions of transformation. Thus, the analysis of the documents allows for the identification of the socio-pedagogical values that underpin them and that reflect an ideological perspective. In all of the documents analysed, the importance given to validating certain socio-cultural realities of the school's bio-regional context stands out.

Based on our analysis, we present the following findings divided into two main segments. The first concerns the legitimacy of the El Huerto project and its integration into teaching programmes. Its legitimacy undoubtedly comes from its proximity to the school's values, principles, and didactic strategies. The promotion of knowledge and experiences that seek a kind of local sustainable development contributes to the development of a social-school culture capable of critique, in the sense of associating EE and ESD with socio-educational reflections that question dominant practices of production and consumption (Sauvé 1996; Sauvé and Goffin 1999). However, the factual and sustained, but not organic, presence of the horticultural educational project as a complementary activity financed by the AFA and legitimised by teaching staff and the management team is due to the recognition of the need to promote educational projects that emanate from the educational community itself. Notwithstanding this, the project does not have institutional recognition, due to, amongst other issues, its lack of elements for evaluation.

In this context and based on the analysis and interpretation of the documents of the EPC and the El Huerto project, as authors, we infer that the teachability of EE and ESD at the basic stages must include actions and/or tactics that converge in contributing to solutions to the numerous environmental problems that exist today (Ideland 2016); what is more, it must contribute to forming positive attitudes and values towards preserving the environment, such as empathy, democracy, respect, and tolerance, and it must seek the development of an active awareness that will encourage future eco-friendly decision-making in favour of sustainability (Prabawani et al. 2017).

Of course, this sustainability from a place of constructive critique requires teachers to acquire theoretical knowledge relating to the environmental crisis (with a local perspective), as well as being willing to take action and reproduce what is learned in those social spaces where students develop, with the aim of employing a responsible and critical attitude (Meighan and Fuhrman 2018). The design and implementation of learning programmes, understood as having specific formative intentionality, implies paying attention to the questioning and reflections of the teaching staff concerning the thinking and actions of global citizenship. In other words, the design and implementation of a sustainable development project must include a cross-sectional and interdisciplinary vision of forms of co-existence of global citizenship.

The second segment of our findings inevitably relates to everyday educational practice. In this sense, the participation of the educational community in promoting an environmental vision in students from the early years onwards is fundamental. Undoubtedly, the participation of families and socio-educational agents in general favours an empathic vision in students, with them able to employ constructive criticism in the face of the environmental situation, thus transforming them into agents of change through the development of values and attitudes that protect nature (Cázares and de Lourdes Romo 2019). Strengthening a day-to-day connection to nearby natural environments generates a sense of belonging in the students, at the same time as impacting positively on the construction of values and attitudes such as respect, empathy, and critical thinking. Thus, when EE and ESD propose a harmonious relationship between human beings and their natural environment, pedagogies are required that contribute to collaborative work and the active participation of the student body (Wongpaibool et al. 2016; Torquati et al. 2017).

However, such pedagogies should not be limited to the classroom nor to merely reproducing the proposals of institutional documents. Moreover, they should be based on the previous knowledge and experiences that the socio-educational agents and specifically the students have had in relation to nature. Early childhood and primary school students are not strangers to the events that take place outside the classroom; on the contrary, it is precisely their previous knowledge and experiences that can be directed towards reflection,



questioning, and their responsibility in the modification of their own relationships with their eco-social environments. That is, the day-to-day relationships that infant and primary students have with their context (social and environmental) are, in themselves, changing scenarios of construction of personal and collective learning.

In sum, the EE and ESD projects which, as we have analysed in this article, seek to contribute to environmental education (including the capacity for critique) are also very useful pedagogical tools with which to reflect upon the responsibility of each individual in the preservation of ecological environments as the linchpin of global citizenship. An empirical environmental education, that is, processes of teaching–learning with practical contents and methods and in appropriate spaces, will inevitably promote the development of environmental awareness. This in turn will impact the ability to contribute to transforming complex present-day realities that contemplate scenarios beyond those formally envisaged and that connect to other development strategies.

## 5. Conclusions

The EE and ESD paradigms are socio-cultural and political constructions that have undergone transformation since their emergence. Notwithstanding this, the issues of incorporating diverse fields, ranging from, for example, gender equality to biodiversity, continue to be complex. In other words, EE and ESD consist of an accumulation of ideas that, through attributing meaning to certain contents and undergoing certain school experiences, can lead socio-educational agents to reflect upon problems that are both environmental and also pertain to economic and socio-cultural development. As symbolic forms with the capacity to exercise influence, they can be a factor in the standardisation and legitimisation of the local aspirations of the educational authority (Ramírez 2016).

In Spain, the commitment to sustainability in school contexts prioritises actions related to the management of the environment; making the educational model itself sustainable is more difficult given that this implies profound transformation (Tilbury 2012). As seen in our case study, it is becoming more common, predominantly in the first stages of school, to find educational proposals on the periphery of the syllabus with themes pertaining to environmental education, above all with horticultural or agricultural features. It is therefore important to highlight educational projects that seek to promote aspects of environmental education and sustainable development which also contemplate the formulation of reflections on socio-cultural and economic models that propose balanced forms of development for all human beings in both ecological and social aspects.

In accordance with our analysis, we identified two scientific and practical contributions. On the one hand, schools are legitimate spaces for designing pedagogies that keep in mind the openness, transformation, and critical reflection necessary for the collective construction of a kind of citizenship able to take on board and deal with the political, social, and economic problems presented by the environment. At the same time, it must be recognised that promoting an education in sustainable development that disseminates values, skills, and citizen engagement from an early age implies rethinking curricula and didactics in order to train people (teachers, students, and families) to take action and commit to changing their eco-social interactions. In short, the teachability of global citizenship to children necessarily involves the promotion of local strategies.

On the other hand, it is essential to generate and develop environmental education projects in practice that enable pupils from infancy onwards to experience their eco-social context in such a way as to be able to recognise themselves as protagonists of their experiences, trajectories, and narratives. As in the case of El Huerto of Colegio Altamira, the mission of the school should not be so much as to teach pupils a large amount of knowledge pertaining to highly specialised fields but, above all, to ensure that children learn to become global citizens through an empirical environmental education.

In this context, it seems reasonable to acknowledge that our research has two important limitations. On the one hand, it would be desirable to extend the methodological framework to include information provided by the protagonists of Altamira School themselves: the

pupils, teachers, and families. On the other hand, it perhaps remains difficult to defend the idea that such a territorially local experience can connect with other socio-educational experiences in other parts of the world. However, we believe that the findings of this article are applicable to other educational contexts in the sense that it is precisely experiences such as that of El Huerto that show, as an issue common to other possible environmental education initiatives, the importance of developing a local culture of critical reflection. This in turn is likely to lead to the construction of knowledge and experiences that seek a type of sustainable development that is friendly to the immediate environment.

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