





Reconnecting with nature in digital times: The power or supremacy of municipal education policies?

Reconectar con la naturaleza en tiempos digitales: ¿El poder o la supremacía de las políticas educativas municipales?

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ABSTRACT

This article aims to examine the role played by municipal policies in (re)connecting with nature in global digitalization environments. It specifically analyzes how local government can impact the narratives developed by young people about more sustainable educational models and facilitators of links with the natural environment. At a methodological level, a first phase of fieldwork consisted of different activities (directed/undirected, with or without technological resources) involving 154 boys and girls between 9 and 12 years (110) and between 13 and 16 years (44), carried out in different urban natural environments as well as in nature contexts with two weekend camping trips. Data analyzed come from a total of 193 informal interviews conducted by means of direct observation during the field trips. The main results are, on one hand, the role that local administrations are taking on in both formal and non-formal governance issues and, on the other, the capacity shown by the actors under study, from their narratives and actions, in the co-construction of environmental education policies and the consolidation of healthy environments. It is concluded that there is a need to articulate a systematized channel of collaboration between actors (such as schools and municipalities) that have had, until now, less political experience.

Keywords: local government, digitalization, young people, technology, nature, environmental education

RESUMEN

El objeto de este trabajo se centra en examinar el papel que juegan las políticas municipales en las prácticas de (re)conexión con la naturaleza en entornos de digitalización global. En concreto, el artículo analiza las posibles implicaciones que tienen las Administraciones locales en las narrativas que elaboran los jóvenes sobre modelos educativos más sostenibles y facilitadores de vinculación con el entorno natural. A nivel metodológico, se ha realizado una primera fase de trabajo de campo, articulada a través del desarrollo de diferentes actividades (dirigidas/ no dirigidas, con o sin recursos tecnológicos), por parte de 154 niños y niñas de entre 9 y 12 años (110) y entre 13 y 16 años (44), ejecutadas en varios entornos naturales urbanos, así como en contextos de naturaleza en los que se han realizado dos acampadas de fin de semana. Los datos que se analizan provienen de un total de 193 entrevistas informales desarrolladas en el marco de la observación directa llevada a cabo en las salidas de campo. Como resultados principales, se comprueba, por un lado, el papel que están asumiendo las Administraciones locales en cuestiones de gobernanza tanto formal como no formal y, de otro, la capacidad que muestran los actores objeto de estudio, desde sus narrativas y acciones en la co-construcción de políticas de educación ambiental y en la consolidación de entornos saludables. Se llega a la conclusión de la necesidad que existe de articular un cauce sistematizado de colaboración entre actores que (como los centros y los municipios) han tenido, hasta el momento, un menor recorrido político.

Palabras clave: administraciones locales, digitalización, jóvenes, tecnología, naturaleza, educación ambiental

INTRODUCTION

International education management models have undergone substantial changes in recent years, turning towards more decentralizing regulations as part of a global strategy of policies on accountability (Fontdevila, 2019; Parcerisa & Verger, 2016) and promoting school autonomy (Andrews et al., 2019; OECD, 2023). However, local administrations are still residually recognized as power structures in education in many geographical contexts, from a comparative perspective and in relation to other territorial levels (regional or central).

Although it is true that it is a form of governance subject to continuous evolution, as demonstrated by the fluctuations in how some education narratives are articulated with management models (Bolívar & Murillo, 2017; European Commission, 2017). For example, the paradigm of educational success has thus been explained based on the recognition of decentralized systems, although at different levels of competence regulation. While in the 1990s, success was justified by the distribution of powers at any administrative level (regional, local, central), in recent decades it is justified by convergence achieved with educational institution governance. This has led to the discourse on educational sovereignty being transferred to two territorial management models with less political and comparative development (local administration and schools), and to project the idea that governance models with their own identity elements are shaped at each of these levels of power.

In the case of Spain, regulations on municipal policies have increased educational powers for local government —historically focused on the creation, construction, maintenance and safeguarding of public schools (preschool, elementary, special education), also in cooperation with education administrations and compliance with mandatory schooling— to other, non-formal developments that today are proof of the great progress made by municipalities in achieving institutional collaboration projects (Blanco et al., 2018; Subirats, 2022).

The recent passing of Organic Law 3/2020 of December 29, amending Organic Law 2/2006 of May 3, on Education (LOMLOE in Spanish) reinforces alliances between contexts by insisting on the need to foster ‘la articulación y complementariedad de la educación formal y no formal con el propósito de que esta contribuya a la adquisición de competencias para un pleno desarrollo de la personalidad’ (‘the articulation and complementarity of formal and non-formal education for the purpose of contributing to the acquisition of competences for full personality development’) (Article 5 bis). Under these circumstances,

collaboration in social management at municipal level starts to stand out as a solid line of research on the overall well-being of the general population, specifically younger people (Vidal & Castro, 2022). Some authors, such as Barfield et al. (2021) associate the prevention of mental health-related problems with local nature programs, often set in rural contexts, extending the idea that the territory has local assets for health, which are understood as factors or resources that improve health and well-being at individual and community level in certain contexts. A line of study that underlines how public policies are responsible for promoting health and well-being in local territories to respond to major challenges such as the crisis in social cohesion and climate change.

All these studies are beginning to establish the thesis that health —understood holistically— covers not only illnesses, but also a wide spectrum of knowledge such as physical and mental health, and socioeconomic well-being, considering non-medical factors (economic and social) as key in achieving global well-being (Barton & Grant, 2013; Hancock & Duhl, 1988; Northridge, 2003). From an ecological perspective and with an approach based on Social Determinants of Health (SDH) (Butler-Jones, 2012), the resources and social capitals of the different contexts can be decisive in promoting healthy territories.

This new approach linking local policies with social and healthy development also contemplates the need to move from a deficit-based model to a collective coproduction model designed to encourage participation by actors involved in the territory, showing that polycentric governance and participatory research are essential elements in building resilient cities (Cargo & Mercer, 2008; Harting et al., 2022; Holkup et al., 2004; Leung, 2004). Decentralized and multi-level management of urban green spaces has a positive impact on local ecosystemic services (Hancock & Duhl, 1988; Israel et al., 2006; Webb et al., 2018) as the community takes on a dynamic role in the identification and co-creation of a culture that recognizes the value of its assets (Reyes-Riveros et al., 2021).

The European Commission (2021, p.6) defines these nature-based solutions as those ‘that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience [...] through locally adapted, resource-efficient and systemic interventions.’ The opportunity of Nature-Based Solutions (NBS) as a response to different social challenges is recognized globally, from the UN Agenda 2030 for Sustainable Development to the United Nations Framework Convention on Climate Change (UNFCCC) and its Paris Agreement, which has been signed by over 130 countries (IUCN, 2020). The EU has played a leading role in this process according to its R&D priorities and contribution to the UN Agenda 2030 for the SDGs. NBS are mainly effective due to their possibilities for adaptation to local conditions,

economic efficiency, policy and management capacity, stakeholder participation, and appropriate spatial scale and long-term performance.

The paradigm shift in health and how it relates to the territory, from a SDH perspective, are an opportunity to co-create well-being spaces at local level based on community participation and close involvement of actors such as schools, which have historically had a poorly defined responsibility in social management and are now recognized as necessary (Benninger et al., 2021; Goodwin & Young, 2013; Horii et al., 2016; Peters, 2005; Shamrova & Cummings, 2017; Teixeira & Gardner, 2017) to design and accept the proposed solutions (Frow et al., 2016; Mendez, 2015; Webb et al., 2018).

MUNICIPAL POLICIES AND PRACTICES FOR (DIGITALLY) RECONNECTING WITH NATURE

Municipal policies recognized as an expression of the democratization of social life in cities have generally forged participation spaces for different collectives at local level (Subirats, 2017; Vaillant, 2008). Social development that has contributed to articulating and then consolidating organic structures in the local context, as well as generating frameworks regulating powers, scopes and actors responsible for these municipal actions. In Spain, structures for public participation have been spreading since 2007, complemented by specific bodies for children and young people.

Open spaces of power that have been built on citizen sovereignty, focused for a long time on groups conventionally legitimized for participation —adults or the elderly— and which have opened up to children and young people in recent years as new groups deserving of attention due to their involvement in the co-construction of public policies (Cano et al., 2021). Examples of youth participation, the San Francisco Youth Commission for example (Checkoway et al., 2005), confirm that the municipality is a real means to strengthen more democratic societies based on local governance, encouraging the involvement of young people in policy formulation, in decision making, and in mobilization for civil rights.

This confirmation of the revitalization of municipal social and educational fabric through child-youth participation (Cano et al., 2021; Novella et al., 2021) is part of an institutional framework concerned with favoring participation in local governance with independent projects or as part of specific programs such as 'Child Friendly' (UNICEF, 2017). Current political agenda (SGD) has gradually and ever more explicitly introduced child and youth participation as a foundation for creating efficient, responsible and inclusive institutions at all levels, especially local. UNESCO (2019) collaborates directly in participatory democracy projects specializing in youth public policies rolled out in different sectoral actions. In

Europe, the joint EU-COE project ‘CP4 EUROPE – Strengthening National Child Participation Frameworks and Action in Europe’ implemented between 2021 and 2023 is a new paradigm of child and youth participation in a setting — institutional governance— that is very unknown and distanced from these groups (Council of Europe, 2023). The aim of this project is to map the reality of child-youth participation in different states, creating formal strategies that provide mechanisms of power for the younger population.

According to these premises, the article attempts to take another step forward in order to reflect on how local government can impact the narratives developed by young people about more sustainable educational models and facilitators of links with the natural environment. In other words, at this point it is not a question of verifying the democratic benefits of child-youth participation, a thematic review that is widely contrasted (Augsberger et al., 2023; Collins et al., 2018; Novella et al., 2021), but of exploring whether municipal policies (organic structures, programmatic planning, etc.) have any impact on current educational issues such as the construction of child-youth identities and their connection with nature in environments of digitalization. Research by Cano et al. (2021) largely begins this theory by introducing the value of digital environments as spaces to optimize participation and guarantee civil rights among young people, even though the core idea is still the democratization of how municipalities function. These authors study digitalization to highlight that local administrations make poor use to digital environments, which are merely informative, not proactive, decisive, or executive.

Hence, the core issue of this article raises other relevant cross-cutting elements that aim to rethink the hegemony of local administrations as educational subjects in shaping educational models and to verify the relationship between municipal action and schools. As Coll and Rivera (2019, p.19) point out, are schools becoming ‘institutions that, for some, have driven collective socialization but are losing validity day by day’? Or on the contrary, are education institutions a new asset in the process of co-creating nature-based solutions as argued by authors including Benninger et al. (2021) and Cummings (2017).

INSTITUTIONAL CONTEXT

Set in the scope of territorial policies, this article is an attempt to open a line of research on the weight that organic structures provided by local administrations can have in the development of municipal education profiles in terms of awareness policies with natural environments (public policies mediated or not by digitalization, governance styles, etc.). The study is limited to Salamanca and its province based on this city’s background in participation.

Salamanca was one of the main municipalities to formalize the Municipal Education Institute (IME in Spanish) in the 1980s, giving the city powers to support schools. The IME has now evolved to become the Salamanca City of Culture and Knowledge Foundation, an institution that will be analyzed in this article to identify its training options and then verify the correlation between municipal actions and the young population, all for the purpose of responding to the question: Can local policies encourage a greater connection with nature in children and young people (aged 9 to 15)?

Another three types of scenarios are also analyzed for child-youth participation; these are described by Novella et al. (2021). Specifically, they are participation in a municipal body such as the Child-Friendly City, of which the municipality of Carbajosa (Salamanca) is a member. In both cases the initial scenarios are more formal in terms of the participation of children and teenagers, but with different nuances. The first offers support for education in schools and with narrow scope for decision-making capacity, while children take on an active role in creating municipal public policies in the second scenario. All with the idea of responding to research questions such as whether municipal public policies (existence of leisure institutions, programmatic planning, education budgets, organic municipal structure, etc.) are conditioning narratives (discourses, reflections, words) that can express the connection and awareness of school children in their relationship with nature.

(Local) institutions and actions for connecting with the natural and digital environment: Salamanca City of Culture and Knowledge Foundation

The Salamanca City of Culture and Knowledge Foundation was created by the city council and is a cultural and educational legal entity. It aims to foster, promote, carry out, produce, program, organize and implement cultural, educational, and artistic or leisure activities. Its specific purposes also include the organization and management of Municipal Music and Dance Schools; public preschool education (0-3 years) management; creation of lifelong learning and support programs for non-profit entities and bodies; creation, publication and distribution of publications and educational material as a complement to the activities organized by the Foundation.

In this sense, the Foundation is a channel for the City Council to participate as another agent in the teaching process. Each year it offers the city's schools a series of activities in collaboration with other municipal bodies so they can apply to take part in them. Activities are divided into thematic blocks and scheduled for all education levels, from preschool to high school, as well as vocational training and special education.

In writing this article we focused on the Nature and Environment block. The catalog for this area includes a total of 34 current activities. Figure 1 shows the keywords in the activity titles. As can be seen, the proposals revolve around words like nature, walking, development, biodiversity, vegetable garden, plants, park, Tormes (river) and Salamanca; the last is repeated often as the essence of the activities is mostly to bring the city and resources (in this case natural) closer to the school community.

Figure 1

Keywords in activity titles. Nature and Environment



Their educational programming includes learning situations, objectives, content, recipients, location, methodology and key competences to be achieved. Based on the eight key competences set in the LOMLOE education act, in this case, we find that most activities are mainly associated with the Science and Technology Competence and the Personal, Social and Learning to Learn Competence, and many of them revolve around the use of digital tools.

Various entities collaborate in implementing the proposals, all of them local: Council Education Department, Lorenzo Milani Farm School, Institute of Natural Resources and Agrobiology of Salamanca IRNASA-CSC and the Tormes-EB foundation, among others. Most initiatives are also linked to projects and programs such as the LIFE Vía de la Plata project (LIFE19 CCA/ES/001188). This initiative is part of Savia, the Salamanca Infrastructure Strategy, and is designed to set up a green infrastructure network in the city. The goal is to involve citizens in the process with public participation, training and dissemination. It is a European project co-funded by the European Commission LIFE program and headed up by the Municipal Housing and Urban Development Board.

(Local) institutions and actions for connecting with the natural and digital environment: Carbajosa de la Sagrada

Carbajosa de la Sagrada has been recognized as a 'Child Friendly City' by the Permanent Secretariat of the Child Friendly Cities initiatives, formed by the Ministry of Social Rights and Agenda 2030, the Spanish Federation of Municipalities and Provinces, the 'Needs and Rights of Childhood and Adolescence' University Institute (IUNDIA) and UNICEF Spain since 2012. A recognition based on various initiatives to promote children participating in public life, thus guaranteeing their rights. One of these is the City of Children municipal program,

Important due to its projection at various levels. In terms of municipal politics, boys and girls participate in local organic structures, forming part of the plenary session through the Children's Council that meets up to three times a year to explain and share their proposals for improvement of the government representative. At social level, because its 'with the eyes of children' program analyzes and shares municipal needs, broadcasting them on the 'little voice' radio program where they can not only express their concerns and perspectives with the rest of the population, but it is also a tool for connecting with schools, guaranteeing that both actors are jointly responsible for social and civic matters. Organically, this form of participation is an initiative in which participation experiences are managed by local government (Cano et al., 2021) as part of municipal actions encompassing different institutions and actors, and with continuity over time.

The council is also involved in the Program for the renaturalization and adaptation to climate change of school playgrounds. Its main goal is to significantly transform outdoor school spaces through renaturalization. This project includes educational goals associated with physical health, healthy habits, inclusion, and equality by creating green spaces, school vegetable gardens, vertical gardens, ground permeability and other nature-based solutions, funded by REACT-EU (Program for

climate adaptation through renaturalization of public-school playgrounds in Castile and León funded by REACT-EU).

Collaboration between the Natural Heritage Foundation of Castile and León, the Regional Department of Public Work and Environment, and the Regional Department of Education, has made it possible to implement this program in line with the agenda 2030, providing teacher training, monitoring and assessment to guarantee effectiveness.

The Playgrounds activity has included 65 elementary and high schools in Castile and León (35 in rural areas), promotes the integration of teaching outdoors, and adapting the syllabus to outdoor spaces in line with healthy habits at school. This program is a response to the COVID-19 pandemic. In the Child Friendly City of Carbajosa de la Sagrada, children actively participate in improving the municipality; they propose ideas through the Children's Council that meets with the mayor three times per year. Since 2007, the Ladera and Isabel Reina de Castilla schools have been encouraging children to take part in assemblies and councils where their requests are presented at annual meetings, all with support from the Regional Department of Education.

METHOD

Population and sample selection

The fieldwork phase comprised different activities in the natural urban spaces of Carbajosa, Aldehuela, Isla del Soto and Würzburg, as well as weekend camps at an environmental initiative center (in Almenara de Tormes), and at the Peña Negra Hostel (in the Sierra de Béjar mountains). Outings that included guided and unguided activities, some with technology and others tech-free, but all intended to record information on the children's behavior and level of connection in a natural and urban natural setting, mediated by technology. Connection with the natural environment was recorded by means of observational studies on behavior: respect/disrespect, care/abuse, interaction, satisfaction, happiness, and with discourses developed on what the context of the activity suggested and evoked in them. The goal of this research is to create a tech solution that facilitates a child's bond with nature without causing dependency, anxiety or stress.

The study sample was 154 boys and girls, 110 aged between 9 and 12 years old and 44 between 13 and 16. Selection criteria included age, voluntary participation in the study, and availability for the dates scheduled for the event. A total of 193 audio and video interventions were collected from the 154 participants. All the children's families filled out an informed consent form on Research Projects on minors or legally incapacitated individuals.

Instruments

Data analyzed come from a total of 193 informal interviews conducted by means of direct observation during the field trips. They collect the children's feelings and opinions during activities in the natural environment. Each participation was recorded and then transcribed for later analysis.

Analysis

Once the interviews were collected and transcribed, they were analyzed using the text mining method described by Caballero and Campillo (2021). This type of analysis requires a text body to be converted into an $X_{p \times n}$ data matrix with 'p' words and 'n' documents by calculating the frequency each word is repeated in each document (interviews).

This matrix, also known as a lexical table (Lebart & Salem, 1988) is created along with applying a lemmatization protocol to homogenize and simplify the data. A protocol that involves converting all verb conjugations to their infinitive and adapting nouns and adjectives to their singular masculine form in Spanish. The matrix is also simplified by deleting empty or complementary words such as prepositions, conjunctions or determiners. Software by French laboratory IRaMuTeQ version 0.7 alpha 2 was used to create the lexical table.

Having obtained the matrix, a mathematical transformation known as characterization value (Caballero & Campillo, 2021) was applied to reweight the matrix based on maximum characterization instead of maximum frequency. The value is calculated with the formula:

$$f'_{np} = \frac{f_{np}}{\sqrt{\max_{f_i} \sqrt{\max_{f_j}}}}$$

After applying and transposing this transformation ($X_{n \times p}$), data were analyzed with a one-way Manova Biplot (Vicente, 1992) considering the city hosting the event as a grouping variable. This analysis can project rows (participating boys and girls) and columns (words) from a matrix to a reduced-dimension graph considering the directions of maximum separation between groups. In other words, this multivariate analysis allows us to graphically study differences between groups (cities) knowing which variables (words) cause the distinction. Groups are represented by a point on the Cartesian plane and a circle representing the confidence limits calculated using a univariate method with the Bonferroni (1936) and Agresti (2018) correction.

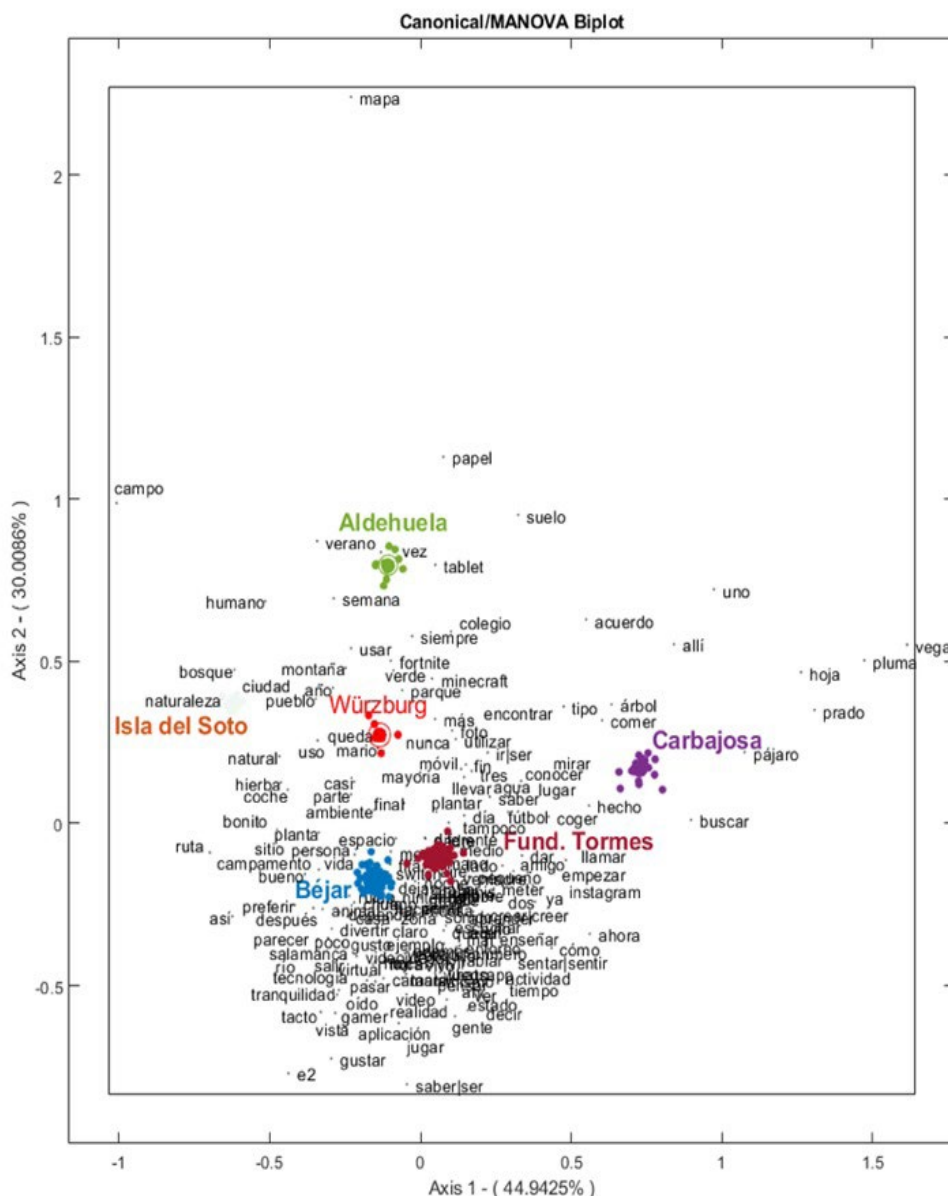
RESULTS

The multivariate analysis of discourses collected in interviews (figure 2) reveals a difference between the different schools of the children taking part in the activities. Despite this significant statistical difference, certain similarities can be observed at qualitative level. The discourse of children from Carbajosa de la Sagrada —beneficiaries and participants of municipal policies for children such as ‘Child Friendly Cities’— can be found on the first quadrant and with a strong alignment with the first abscissa axis. Its relative position compared to other groups clearly sets it apart with its own, well-differentiated discourse.

In the second quadrant and more aligned with the second axis is the group from Aldehuela which, although clearly distanced from the other groups, is not qualitatively distant from others (Würzburg or Isla el Soto) located around the same set of words. These three spaces represent the environments dedicated to field trips in the city of Salamanca.

Finally, the groups representing weekend trips to the Sierra de Béjar mountains and Almenara de Tormes, organized by the Tormes Foundation Located between the third and fourth quadrant, are aligned on the negative values of the second axis and are opposite to the discourse found in the urban field trips in Salamanca.

Figure 2
Multivariate analysis of discourses collected



Each of these groups can be characterized by paying attention to the composition of the thematic blocks (figure 3) by recovering the keywords that characterize each subspace of the plane.

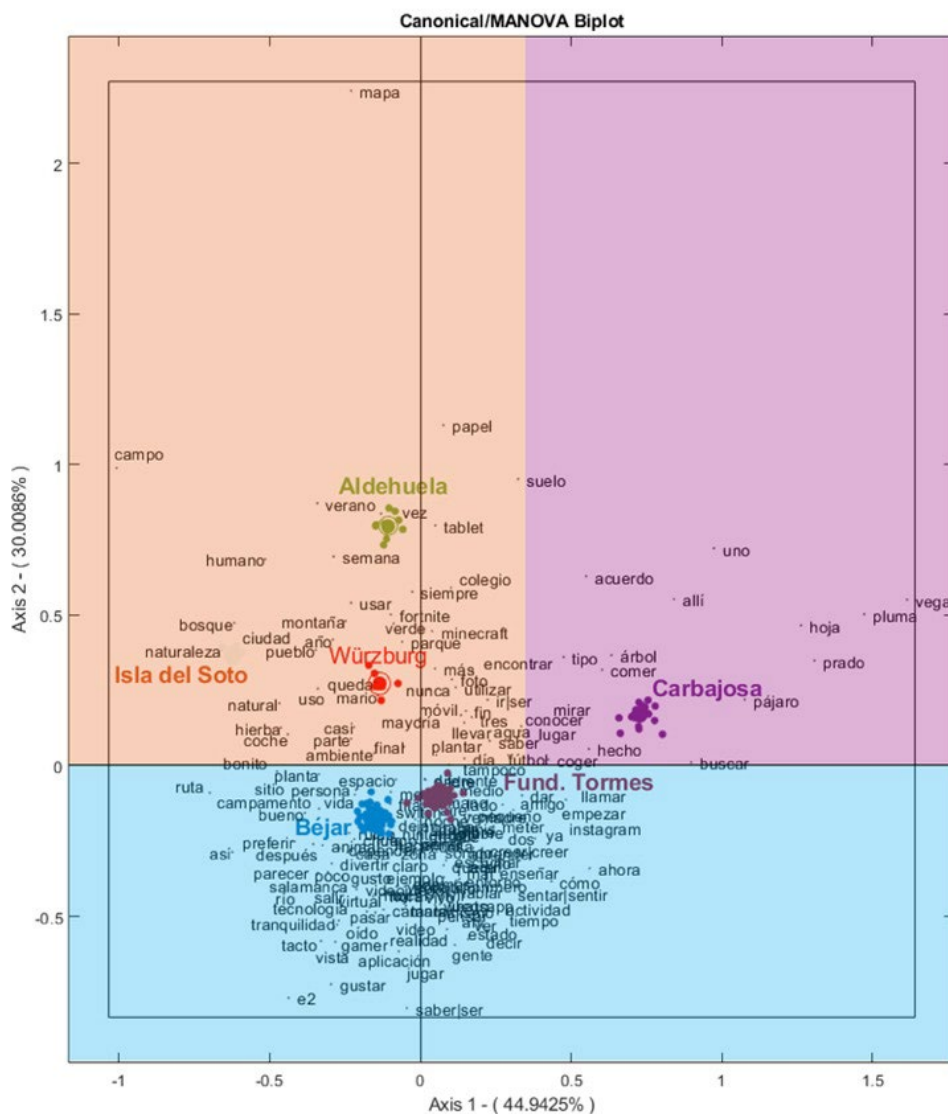
The space around the Carbajosa group (block 1, in purple) therefore has words such as meadow, feather, leaf, field, search, tree, eat, discover, look and play. A discourse that clearly highlights elements of nature mentioned along with actions aimed at observation, learning and play, which could be explained by how this group of children used the natural setting as a context for social, personal and relational development, as well as the appropriation of a culture of participation consolidated by municipal institutions. During the years of compulsory education, schools participate in the Child Friendly City municipal project, working on the ecological, social and technological perspective of the environments in collaboration and coordination with different actors. Hence, the most repeated words are related with nature (tree, bird, feather, meadow, field), but also how the environment is used (eat).

Block 2 (in orange) is represented by groups taking urban field trips in Salamanca (Aldehuela, Isla del Soto and Würzburg). In this case, the words refer to the specific or even exceptional nature of the natural setting: village, summer, week, but also countryside, forest, nature, natural, mountain, green, park, etc., introducing technology from (or in) the natural context such as tablet, Fortnite, Minecraft, photo or cell phone. Children in this second block participate in the activity in natural environments (mostly urban) but with a more technical dimension (knowledge of maps, cartography, recording hiking routes with digital technology, etc.), which demonstrates that the children are familiar with the environment but that it is also widely represented by tech apps. Finally, thematic block 3 (in blue) would characterize weekend trips to Sierra de Béjar and Almenara de Tormes. They present a much richer discourse (more words and space on the larger plane) with a combination of senses along with uses of technology during the activities proposed by the event monitors. Words include hearing, sight, touch, along with know, like, appear, tranquility, prefer and have fun on one hand (third quadrant), and friend, call, Instagram, feel, teach, activity, technology, video, virtual reality, gamer, people, status, etc. The more plural narrative offered by this activity format would be justified by spaces created for playing with technology, but also by the power of designing actions to reconnect with nature by using the senses. A key idea for building child-youth participation policies. It is worth noting that some of the boys and girls participating in these experiences have never had direct contact with natural environments or been taught about environmental development, but their immersion in planned actions to raise awareness of nature has contributed to developing narratives more related with sensory imagination. Free time reserved

for playing with technology has also led them to relate natural contexts with digital development.

Figure 3

Group characterization by keywords



In summary, the data analysis gives three major discourses that characterize the different areas of work. Urban trips in Carbajosa Child Friendly City on one hand, with a discourse clearly aimed at observing nature, birds and the environment. On the other, urban trips in Salamanca with a discourse also focused on nature, but broader and more open (nature, forest, mountain) combined with the use of certain technologies, especially video games such as Fortnite or Minecraft. Finally, weekend camping trips show a discourse centered on a combination of senses with the use of technology in natural spaces.

DISCUSSION-CONCLUSIONS

This article focused on studying child-youth groups proposes three major areas of reflection on the role played by municipal policies in (re)connecting with nature in global digitalization environments. The power that local administrations are taking on in matters of non-formal governance, but also with implications in the formal scope, is evident. This sovereignty is exercised in two directions: actions planned by municipal organic structures and through measures linked with local government seeking the engagement and participation of young people, making this political actor a point of great educational interest. The analysis conducted thus shows that the territory conceived as a new space of power for social well-being and sustainable development is the result of lines of research that emphasize the conception of a new paradigm around healthy spaces determined by non-classical factors of well-being to focus (one of the novel developments) interest on groups, such as children and young people, increasingly more susceptible to participation in institutional structures and bodies.

This block of analysis essentially redimensions and updates the key value attributed to the non-formal space in emerging areas of pedagogy, such as digital reconnection of nature. The role played in some cases by municipal policies creates a new educational framework in which what some authors, such as Todd (2024), have called the 'ecology of encounters' in reference to the transformation capacity of education from the potential of 'interconnection' and 'vital understandings'. An educational model that transcends schooling to become a common project for well-being (Säfsström, 2023, cited in Todd, 2024, p.46).

The second point for reflection is related to the capacity shown by children-youths, from their narratives and actions and as (recognized) institutional actors, in the co-construction of environmental education policies and the consolidation of healthy environments. An idea backed by the discourse of international bodies such as UNESCO (2021) and the European Commission (2022), also receiving strong support from domestic policies (Espejo Villar et al., 2025). Their active role in non-formal governance offers a more human, relational, and transformative dimension

(Augsberger et al., 2023; Collins et al., 2018; Novella et al., 2021) in a framework of post-humanist thinking, critical of the role of institutions, while contributing to the creation of more solid and lasting environments. This idea reconnects with the concept of post-material well-being proposed by Díaz-Romanillos (2024), based on community participation and a 'more significant dimension of human well-being' (Díaz-Romanillos, 2024, p.72).

Recognizing children-youths as a political actor would provide answers to the research questions mentioned at the beginning of this article by verifying that it is precisely the work of schools in collective socialization (Coll & Rivera, 2019, p.19). This not only keeps them current (they do not lose validity), but they are a necessary link in the process of reconnecting with nature.

Finally, and in relation to the legitimacy of this group in territorial management, it is key to highlight that municipal policies contain matters related to structural designs for participation. Narratives generated by young people in more horizontal, plural and open contexts guarantee a continuous level of commitment and behavioral responsibility with the natural environment, as previously pointed out by Todd (2024). Although it can be understood in terms of hegemony and supremacy in relation to the role currently played by schools, this power taken on by local administrations in the construction of emerging pedagogical models goes far beyond this idea. In this article, we believe that it is an opportunity to focus attention on good practices provided by institutions and the institutional actions of municipal policies. Yet it is also true that without going as far as to raise the dilemma between municipal policies and school policies, the article can open a field of research on choice of school in relation to joint participation by municipal institutions in the construction of sustainable and digital educational models.

Finally, it is vital to understand that local planning of ecological, technological and relational development education actions, while important, is insufficient to achieve greater awareness and a higher level of child-youth involvement with the environment. This would put the spotlight on schools, reinforcing the initial idea that these entities are a new asset in the process of digitally reconnecting with nature (Benninger et al., 2021; Cummings, 2017). Additionally, their responsibility in education could contribute to refuting unfounded theses on digitalization that often support political actions and decisions (L'écuyer et al., 2025). Articulating a systematized channel of collaboration between actors (such as schools and municipalities) that have had, until now, less political experience is essential to achieve the goals of the agenda 2030.

LIMITATIONS

While we are aware that the line of research addressed in this article is relevant not only because it is necessary and topical, but also as it provides an effective and real extension of the map of actors involved in education, we must acknowledge that one of its main limitations is that this first study has focused on a local context with a strong educational tradition in the non-formal sphere but with a scope of action limited to a territory that may not be representative in the international — or even national— geopolitical panorama. This despite discourses and narratives taken from the institutional strategies of recognized international actors such as UNESCO, OECD, European Union, etc., all point in this direction.

We feel that it is important to continue exploring this line of research, increasing its representative scope to other contexts and related themes (child-youth participation in health and social well-being models, for example).

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