Introduction

Since the mid-1970s, a debate that has particularly affected the Global North has revolved around the meaning of cultural literacy. This concept draws on E. D. Hirsch's claim that shared knowledge enables common cultural experiences. This North American theorist viewed cultural literacy as a tool for reducing poverty and illiteracy, as well as a means of supporting social cohesion and public welfare (Hirsch, 1988). He argued that a degree of educational conservatism was necessary to achieve liberal and progressive political goals (Maine et al., 2019). According to this view, communication among strangers was facilitated through engagement with a shared body of traditionally curated educational texts and cultural knowledge.

Critiques of Hirsch's work have focused on its associations with traditionalism, elitism, and issues of representation, as noted by Edwards (1984). Edwards argued that Hirsch's predominantly Anglo-Saxon canon undermined the values of cultural diversity and could result in a "rigid, tradition-based book list" that was "too elitist, too exclusionary" (p. 71). Furthermore, the idea of a national culture was also not compatible with the complexity-oriented and critical views on the concept of culture prevalent in the field of anthropology today (Abu-Lughod, 2008).

Nowadays, the debate is still alive and raises a significant concern: while it is important to understand one's dialogue partners across cultural differences in order to establish common ground, it is equally important that such efforts are reciprocal. If only certain cultures or groups are expected to adapt or relinquish their own knowledge in favour of others, then this process can no longer be described as dialogue; rather, it becomes a form of cultural repression.

Decolonising theories (Tuck & Yang, 20212; Battiste, 2013) have complexified the discussion, questioning and exploring not only what should be taught and learned in pluralistic societies but also from which point of view the mainstream knowledge is produced. In educational settings such as schools, this has often been translated into an aim of decolonizing the curriculum to help schools include and value the cultures and knowledge of people often ignored, and correct the wrongs linked to these exclusions.

From it, it is possible to start thinking in Critical Cultural Literacy. A concept that is addressed by the Horizon Europe research project EXPECT_Art: Exploring and Educating Cultural Literacy Through Art (Grant Agreement 101132662). This project aims to enhance recognition of cultural diversity and promote critical cultural literacy by engaging with the

cultural expressions of minority and marginalised groups.
In the context of this study, the interventions took place within the project “Fem Ciència” (We do science) in a primary school of Barcelona. This project looks for promoting scientific culture among primary students through observation and experimentation routines from their own environment that lead to scientific reasoning.
From this curricular experience, this article has the goal of responding to how a curriculum decolonisation can be approached through ‘deviations’ within this particular scientific project. In this context, deviations are understood as exercises in epistemological decentring that shift the focus away from the centrality of subject-specific content towards the recognition of forms of knowledge, experiences and ways of life of students who, the school, has rendered invisible or marginalised. In this sense, they open up fissures that challenge the hierarchy of knowledge and broaden the possibilities for the recognition of historically subordinated subjects and epistemologies. These strategies aim to support teachers in transforming their thinking and practice toward a critical cultural literacy that values all cultures and forms of knowledge.
Based on this question, the specific objectives of this article are as follows:

1. Introduce the idea of ‘deviation’ in a primary school as part of the process of curricular decolonisation in the EXPECT-Art project.
2. Explore deviations in teaching, not as an academic imposition, but as a strategy that helps address the process of decolonizing the curriculum.
3. Use critical reflection to analyse a case that illustrates the possibilities and tensions of deviation in recognising the knowledge and experiences of children and families who are seen as marginalised communities in schools.
4. Identify the possibilities and tensions of bringing decoloniality into school education.

To address these objectives, the article is organised into four sections. The first one outlines the theoretical framework, drawing on debates about cultural literacy, introducing the notion of ‘critique’ within this context, and explaining its relevance to discussions of coloniality and decoloniality in the school curriculum. The second section details the study’s methodology, which centres on the analytical concept of ‘deviation’. This approach makes it possible to explore decoloniality in the curriculum without imposition, focusing instead on practices enacted by teaching staff. The concept of deviation is illustrated through fieldwork at a primary school in Barcelona. In collaboration with teaching staff on an intervention

within the school's science education project, a critical ethnographic perspective is adopted. This perspective is used to reflect on key incidents during the project's implementation, revealing how 'deviation' helps generate shifts that recognise and incorporate the histories of pupils and their families. The third section provides an example: the analysis of a deviation process in an inquiry concerning the strength of materials used in students' helmets. Finally, the article discusses the process undertaken and highlights the contributions of the study and the EXPECT-Art European project of which it is a part, aiming to ensure that all students, regardless of cultural or socio-economic background, can find their place in learning.

Theoretical Perspectives: Critical Cultural Literacy and Decoloniality

This article enters into dialogue with Hirsch's (1998) conception of cultural literacy as a body of shared knowledge that enables common cultural reference points and contributes to social cohesion. Such an approach assumes a largely unified cultural tradition and promotes a dominant historical narrative as the basis for collective understanding (Maine et al., 2019).

However, culture cannot be understood as something that is merely inherited or transmitted. As Woodhouse (1898) argues, culture must be interpreted, questioned, and reinterpreted. This perspective draws attention to the role of schools and other institutions as key sites of cultural production rather than neutral spaces of cultural transmission (Giroux, 1992). From this standpoint, Hirsch's model appears increasingly inadequate for contemporary multicultural, multilingual, and globally interconnected societies. Freire (1993), for example, challenges the notion that literacy consists solely of decoding texts, arguing instead that literacy involves reading and interpreting the world. Cultural understanding therefore cannot be grounded in the assumption of a fixed national culture. Processes of migration, diaspora, and global interconnectedness continually reshape cultural identities and challenge the notion of a singular cultural heritage. Consequently, both the idea of a national culture and the authority to define it must be critically examined.

A further critique is developed by Spivak (2012), who rejects conceptions of cultural literacy based on the transmission of fixed canonical knowledge. Instead, she foregrounds reading, translation, and attentiveness to relations of power. Drawing on Bateson's (1963) notion of the double bind, Spivak argues that cultural literacy should enable learners to inhabit contradiction and uncertainty rather than seek premature resolution of difference. Within

this framework, art becomes a particularly valuable domain of knowledge because it allows emotion, reflection, and action to coexist, encouraging engagement with ambiguity, complexity, and open-ended inquiry (Morales, 2016).

In contemporary societies, individuals encounter multiple cultural traditions, identities, and systems of reference. Being culturally literate therefore requires engagement with knowledge and experiences that extend beyond narrowly defined national frameworks. Many young people today are shaped by cultural references that transcend local contexts and place them within transnational and cosmopolitan networks. One of the central challenges of contemporary cultural literacy is therefore how to navigate the relationship between local and global cultural imaginaries.

The addition of the term critical to cultural literacy shifts attention to the political dimensions of knowledge. Criticality refers to the capacity to question taken-for-granted assumptions, challenge dominant ideologies, and interrogate the legitimacy of prevailing social arrangements. As White (2008) argues, literacy cannot be divorced from politics because all literacy practices are implicated in relations of power and hegemony. From this perspective, critical cultural literacy can be understood as a response to historically dominant cultural narratives and as an effort to create more inclusive and plural frameworks of cultural participation. It is within these debates concerning the expansion of cultural literacy that this article is situated.

The move from critical cultural literacy to decoloniality is grounded in a shared commitment to critique. Both perspectives seek to uncover the assumptions, hierarchies, and exclusions that underpin dominant systems of knowledge. In this regard, several scholars have argued that critical literacies can create conditions for decolonial possibilities through political and pedagogical action (Govender, 2023; Romero Walker, 2021). Decoloniality, however, extends critique further by directing attention to the colonial foundations of contemporary knowledge systems and social institutions.

The debate surrounding critical cultural literacy ultimately raises a fundamental question: whose knowledge is recognised as legitimate within educational systems, and whose knowledge remains invisible? The argument advanced here is that the exclusion of the histories, cultures, and epistemologies of minoritised groups from many school curricula in the Global North should not be regarded as an accidental omission. Rather, such exclusion is constitutive of the colonial episteme itself. Colonial modes of knowledge production rely on processes of silencing, dehumanisation, and epistemic hierarchy through which certain forms of knowledge are established as universal and authoritative while others are rendered

marginal, deficient, or unintelligible. From this perspective, curricular omissions are not simply educational failures; they are mechanisms through which coloniality continues to reproduce itself.

According to Argüello Parra (2015), coloniality has not disappeared but has instead adapted to changing historical conditions. Similarly, Castro-Gómez and Grosfoguel (2007) argue that contemporary coloniality remains intertwined with the legacies of modernity and capitalism and continues to reproduce racial, epistemic, gendered, and spiritual hierarchies. Coloniality should therefore be understood not as a historical event but as an enduring structure of power.

Thus, structures of domination that emerged during the sixteenth and seventeenth centuries, including regimes of national belonging, racialisation, gender differentiation, and educational classification, continue to shape contemporary social, political, and epistemic relations. As Mignolo (2003) argues through the notion of the coloniality of power, coloniality functions through the continual production of difference and hierarchy:

"The coloniality of power is the device that produces and reproduces the colonial difference. The colonial difference consists of classifying groups of people or populations and identifying them in their faults or excesses, which marks the difference and inferiority concerning whoever classifies. The coloniality of power is the epistemic place of enunciation in which power is described and legitimized. In this case, colonial power" (p. 39).

Grounded in this understanding of the coloniality of power, decolonial pedagogy emerges as a framework for challenging the persistence of colonial forms of knowledge and authority. As a matrix of thought and action, it encourages individuals to engage critically with history from their own situated experiences rather than from positions of detached observation. In this sense, Argüello Parra (2015) describes decolonial pedagogy as "a lens through which to read history critically and from within, rather than as external spectators" (p. 32).

At the curricular level, decolonisation involves questioning not only what is taught but also what remains unspoken. It requires attending to silences, absences, and forms of knowledge that fall outside dominant narratives and canonical traditions. Such an approach recognises that norms are never neutral but are frequently implicated in colonial, neoliberal, and ableist projects. From this perspective, decolonial crip studies offer important insights. Canagarajah (2023), for example, proposes the concept of deviation as a way of understanding embodied and communicative differences without framing them as deficits.

Whereas notions of abnormality imply deviation from a presumed norm, the concept of anomaly treats difference as an ordinary feature of human existence rather than as a deficiency requiring correction.

Curriculum decolonisation therefore aims not only to recover marginalised forms of knowledge but also to address ongoing forms of epistemic injustice. In this regard, Bergin's (2002) notion of epistemic difference is particularly relevant, referring to the diverse ways individuals understand and experience the world according to their social, economic, cultural, sexual, and historical positions. Recognising such differences requires moving beyond universalising assumptions and creating space for multiple ways of knowing and being.

This reorientation also implies a broader understanding of education itself. Rather than serving exclusively economic priorities or national projects, education should be grounded in ethical commitments that encompass the human, the communal, the ecological, the ancestral, and the planetary. A central element of the decolonial project is therefore the recognition of the wisdom, agency, and knowledge of groups historically positioned at the margins of dominant society, including Indigenous peoples, Roma communities, racialised populations, migrants, people experiencing social and economic exclusion, and persons with disabilities (Montalti, 2024).

Such concerns have important implications for educational practice. Bernstein's (1975) work on linguistic codes demonstrates how schools often privilege forms of language associated with socially dominant groups while marginalising other communicative practices. When educational institutions fail to recognise these differences, they restrict opportunities for participation and contribute to forms of epistemic exclusion. As Pohlhaus (2017) argues, the failure to acknowledge diverse forms of knowledge and experiences undermines the possibility of generating genuinely shared understandings of reality. The result is not only exclusion and misrecognition but also a narrowing of the horizons through which knowledge itself can be produced and understood.

Ultimately, a decolonial approach to cultural literacy seeks to make visible multiple histories, temporalities, and perspectives. By recognising epistemic plurality and challenging inherited hierarchies of knowledge, it becomes possible to imagine more inclusive forms of education capable of engaging critically with the complexities of an interconnected world.

The concept of 'epistemic difference' connects directly to decoloniality and the pursuit of 'decolonizing the curriculum.' In this way, decolonisation at the school level happens when

we recognise and respond to epistemic gaps where exclusion and violence occur. Curriculum decolonisation, therefore, involves: (a) acknowledging exclusions and silence about other cultures and knowledge, and (b) integrating histories and knowledge of marginalised groups into curricular discourse.

Decolonising the curriculum requires challenging epistemic injustices and questioning the dominance of Western knowledge traditions (Paraskeva & Steinberg, 2016). However, efforts to dismantle educational hierarchies can generate new forms of exclusion when decolonial agendas are imposed without regard for existing school cultures, values, and constraints (Fassett & Warren, 2007). This reveals a central tension within decolonising initiatives: the need to transform dominant structures while avoiding the reproduction of new forms of epistemic authority. Rather than a problem to be resolved, this tension constitutes a productive space in which meaningful pedagogical and curricular transformation can emerge.

Considering this risk, the decolonising perspective we adopt draws on authors from the Global South, such as Daiara Tukano (2025). Tukano sees colonisation as a practice that deprives other cultural traditions of self-representation. Starting from this idea, coloniality is not just a past event. It is an ongoing way of seeing the world and relating to others that recognises the usurpation of school curricula, especially where students come from other cultural and social traditions.

Methodology

In the EXPECT_Art project, we adopted a critical ethnographic approach, understanding ethnography as helping to uncover cultural patterns and insider perspectives, making it valuable for understanding how school pedagogies work and promoting educational advocacy (Anderson & Irvine, 1992). In this approach, fieldwork was built on a community-based research design aiming at “connect[ing] academic researchers with individuals, groups, and community organizations to collaborate on a research project to solve community-identified and community-defined problems” (Boyd, 2014). Community-Based Research centres marginalised communities, promotes equitable collaboration, employs flexible iterative methods, and is oriented towards social action.

If ethnography allows for detailed examination of unique or outlier cases (Anderson & Irvine, 1993), the EXPECT_Art fieldwork cases were structured as case studies. Flyvbjerg (2006) argues that case studies are ideal for generating rich, context-specific knowledge.

This fits with EXPECT_Art's decolonial and community-based approach, where knowledge is seen as decentralized and evolving which case studies are well-equipped to capture.
The community-based approach in Spain was redefined by recognising the schools as the primary community of collaboration. Each school already has an integrated local network; our collaboration focused on strengthening or expanding connections with local communities. The adoption of community-based research methodologies, framed through a decolonial lens, emphasised the importance of approaching the field with attentiveness to power dynamics, local epistemologies, and relational accountability. Participatory observation within this framework required not only immersion but also a commitment to reciprocity and the co-construction of knowledge with community members, thereby challenging traditional extractive research paradigms.
Grounded in these principles of reciprocity, co-construction, and epistemic plurality, the EXPECT_Art project sought to translate decolonial commitments into educational practice. In doing so, we sought to include students' cultural knowledge and sensory experiences—especially those of historically marginalised groups (Vergès, 2019)—and to implement pedagogical approaches that integrate these literacies, helping to displace the coloniality ingrained in curricula.

Deviation as a methodological strategy

We address the tension of entering schools to conduct critical ethnographic studies for EXPECT_Art, a European project focused on decolonising the curriculum by introducing artistic practices that foster critical cultural education. The aim of this project is to enhance the recognition of cultural diversity and promote critical cultural literacy by engaging with the cultural expressions of minority and marginalised groups. To guide our approach, we adopt the concept of 'deviation,' which in curricular terms means "a specific issue of the curriculum discrepancy between suggested and taught using this approach" (Zaman & Khawaja, 2022, p. 31). As it was mentioned, the school curriculum often upholds hegemonic narratives and assimilationist conceptions (Banks, 2014), creating the backdrop for our intervention.
Our use of 'deviation' aims not to impose an external vision but to engage teachers and their existing classroom practices. We suggest deviations that reveal alternative perspectives, making visible possibilities that include previously silenced voices and histories. These deviations can generate epistemic gaps, allowing teachers to identify absences and address

epistemic injustices within pedagogical relationships. Promoting 'deviations' challenges the school curriculum and can help students and teachers engage in a critical and culturally significant learning experience. Deviations affect the ways of approaching the learning 'contents' and enable children and families to find their place in the school curriculum projects. Deviation, understood as a slow, unpredictable, embodied form of communication, resists these imperatives and constitutes a form of decolonial resistance that challenges both colonial epistemologies and neoliberal multiculturalism. Through EXPECT_Art, we employ deviation as both a strategy and an analytic tool to promote curriculum decolonisation without directly confronting the school canon, adopting a temporary stance while supporting teachers toward a decolonising perspective.

The context of research

The school selection was based on three main criteria: schools located in urban areas of Barcelona at risk of being marginalised; schools whose students and families were characterised by rich multicultural backgrounds from the Global South; and schools with which previous collaborations had taken place, allowing for continuity and mutual understanding.

Fieldwork in Barcelona was conducted at two schools, but this paper focuses on one institution located in the historic old town near the harbour district. The Gothic Quarter, which includes the school, has 15,729 residents. Most students' families live in El Raval, a nearby neighbourhood with 47,274 inhabitants, including strong Muslim and significant Latin American communities. Some European families are interested in the school because, as one father described, it provides an environment that shows them what the world is like today. This context shapes the school's unique demographic and educational landscape.

This school is classified by the Catalan Department of Education as having high or very high complexity, characterised by a high proportion of considered vulnerable pupils, significant cultural diversity (due to recent immigration) and a low socio-economic status. These schools receive additional resources, though studies suggest they need further support to improve their academic results (León & Albaigès, 2024). The label 'highly complex' often implies a certain degree of marginalisation and a lack of recognition for the educational work being carried out.

Against this backdrop, the school serves children aged 3 to 12 and has offered an arts-focused educational project for eight years, integrating the arts as a central element of the

curriculum. This approach supports personal and collective growth among students and teachers and establishes pedagogical connections with nearby art institutions and the surrounding community, further bridging the gap between the school and its environment.

The fieldwork

Fieldwork was conducted during the 2024–2025 academic year using the critical ethnography research approach.

A first phase, named "Entering the field" (October–December 2024), consisted of participant observation aimed at becoming familiar with each school's institutional ecology and establishing relationships with teachers, students, families and community members. This phase focused on understanding how artistic practices were already present in everyday school life. During this period, the team focused on listening and observing what was already happening in the school, avoiding assumptions or framing the school and students from a deficit perspective.

In a second phase, named "Developing collaboration" (January–May 2025), the research team collaborated with teachers to design and develop a series of artistic proposals. In the case of the Gothic Quarter school, we integrated this proposal with the "Fem Ciència" project developed with two 5th-grade primary classes and, as mentioned earlier, focused on exploring the scientific method to address questions formulated by the students.

The school requested that the collaboration involved classes A and B, separately, once a week for two hours. With 5th-grade A, one artist–educator–researcher worked on Tuesdays from 9:00 to 11:00 a.m., guided by the question, "Which material can better resist a bike or scooter accident?" With 5th grade B, two artists–educators–researchers worked on Fridays from 9:00 to 11:00 a.m., following the question, "How does pollution in river water affect the ecosystem of birds and animal inhabitants?" In this article, we will focus on what happened in the 5th-grade A class, as it allows us to appreciate in detail how the practice of deviation allowed movements that, initially, were not on the project agenda.

The analytical procedure

In both phases, a collaborative field notes document was shared among researchers to document participatory observations and significant deviations suggested and negotiated by researchers. At the end of the project, interviews were conducted with participant teachers

and students to share the collaborative process and the benefits derived from the experience of 'curricular deviation'.

During the second phase, particular attention was paid to identifying key incidents (Gremler, 2004; Tripp, 2011), that is, situations in which participants' engagement with artistic practices generated notable reactions, shifts, or relevant effects on cultural literacy and learning. A characteristic of these incidents is that they suggest and develop 'deviations': a) based on what teachers propose; b) through which pupils learn to interpret the world in its cultural, social and political dimensions; and c) to develop a critical awareness of dominant narratives.

Researchers thematically coded diaries and interviews to identify key incidents in which an enacted movement or shift toward curriculum decolonisation and recognition of students' cultural references occurred. Particular attention was given to moments in which the researcher-teacher position receded, enabling a co-creative environment in which students' lived experiences became central to the inquiry process.

Having established the methodological frame and process, we now address the initial question on how a curriculum decolonisation can be possible through 'deviations'. This connection aims to illustrate how our research process supports and helps balance power relations within educational institutions. Specifically, through a selected key incident, we show how the strategy of deviations has fostered the recognition of students' and families' cultures and prompted the school to acknowledge the inequalities and omissions often perpetuated by the curriculum and school organisation.

Findings and Analysis

The school where this research was conducted integrates the following principles into its Educational Project:

…diversity, recognizing it as an asset that enriches our community, making us more pluralistic, and integrating it into our daily practices.

…to the environment, viewing it as a space for meaningful learning by embracing diverse proposals, projects, and working methods. …to families, fostering connections and collaboration between them and the school, and encouraging active participation from the entire educational community.

…to society at large, making teaching and learning processes visible and openly sharing our

collective aspirations. This ongoing effort aims to cultivate a school that is open to dialogue, optimistic, and truly pluralistic.

The school proposes initiatives to design a curriculum and environment that explicitly address interculturality. Teachers promote language exchanges by introducing students' languages of origin in class, often asking, "How do you say this in (student's language)?" They also inquire about specific traditions, such as New Year's Eve and Ramadan. The school organizes an annual Festival of Cultures where families share traditions through songs, food, and costumes. Classroom posters and art installations recognize the cultural and linguistic diversity of students and their families. Through the school's involvement in the EXPECT_Arts project, they are taking it a step further by incorporating the culture and voices of families and pupils into the curriculum.
To illustrate what happens when a deviation is introduced into a curriculum activity, we will describe a key incident recorded through participant observation in the 5A grade class. Of the three incidents recorded in this class, we have chosen the one entitled 'Materials' Life Cycle'. While we could have selected any of the other from the two groups, we focused on this one because it demonstrates how, during the creation of a world map as an artistic strategy—plotting materials extracted from different countries—pupils began to make connections to the histories of their families' countries. This realization, alongside a critical understanding of the extractive relationships surrounding materials and their impact on the lives of these countries—such as emigration—represents a transformative experience. It contributes to the development of critical cultural education and marks a first step towards decolonising the curriculum.

Case: Materials' life cycle

A key incident within the 5th grade science curriculum project was identified as the research question began as follows: "Which material is most resistant to impact when riding a bike or scooter?" The EXPECT_Art team added another inquiry. They helped students explore the origins and life cycles of materials the children thought might be impact-resistant.
Combining empirical observation, research-based inquiry, and artistic methodologies, including drawing, material organisation, tactile engagement, and speculative interactions with objects and materials, the students mapped the trajectories of twelve materials. The

main outcome of the project was the collaborative creation of a visual representation of the materials' life cycle on a global map, which facilitated a deeper understanding of how materials traverse different territories and embody distinct forms of agency and relationality with human and non-human actors throughout their lifecycle.

In a final session, the art mediator led a reflective, student-driven discussion about the map the class had made. The students shared what they learned and discovered. They began to share cultural stories, memories, and family traditions. A girl from Morocco described a ritual with geese. A student from Bangladesh talked about her family's fishing. Another Moroccan student explained the meaning of ram sacrifices. One peer from Southern Africa described local architecture. These stories showed how complex identity, belonging, heritage, and diaspora memory can be. Although these students spoke with deep feelings about 'their countries,' they were all born in Spain (Castro et al., 2025, p. 41-42).

Introducing a critical cultural perspective was not entirely new for some teachers, though it had not previously been labelled as such. What was novel, however, was integrating this perspective into a project like 'Fem Ciència,' which focuses on learning the scientific method. Connecting the issue of helmets' materials resistance with a practice of deviation, the focus was placed on the geographical origin of the materials, the consequences of their extraction in the countries of origin of the students' families, and the understanding of how that extraction generally creates modes of colonial relations prompted a fourfold shift. The final aim of this deviation was a) acknowledging that science is not neutral and is always situated; b) understanding that knowledge gains relevance when it connects with students' lived experiences; c) recognizing students' families experiences as sources of knowledge worthy of inclusion in the school; and d) appreciating that every classroom conversation is inherently cultural, emotional, and ethical, requiring a repositioning of relationships and knowledge. This is something one the class teacher of 5th grade acknowledges when he says:

"I would say that the area they explored most deeply was, above all, understanding each of the materials and their life cycle, from the material's extraction, what type of material it is, and what happens to it until it transforms and disappears. I think the students delved most deeply into the material's entire life cycle. Yes, and basically this, and the ways they extracted information, like discovering, for example, that a material wasn't what they thought, and from there creating addenda based on their own interests." (Interview with the co-teacher of grade 5A, 8 April 2025)

This approach prompted several students to share that the most striking aspect was the project's connection to the geopolitics of materials. This resonance not only revived their traditional knowledge, as previously noted, but also helped reestablish the school's relationship with their family's culture and way of life.

One of the children reflected on the research process: "When we did the research on materials, there were some materials I didn't think came from that thin material, and it turned out they did." (Student 1. Focus group with 5th grade children, 25 April 2025)

One student described his surprise about international landfills:

"For example, I didn't know that so many rich and poor countries had so many landfills. For instance, in Russia, a wealthy country, I didn't think they had landfills and that they give them to poor countries to dump instead of reusing them." (Student 2. Focus group with 5th grade children, 25 April 2025)

Another testimony talked about pollution and international dumping:

"There are things I didn't know. I mean, in my parents' country, Morocco, there's hardly any pollution, but there are countries like what he said about Russia (although it's not as rich now as he said) where, to avoid polluting their own country, they pay another country to manage their pollution. Okay, they don't pollute their own, but it's still wrong because they pollute someone else's." (Focus group with 5th grade children, 25 April 2025)

Another student expressed concern about mineral extraction: "I didn't know before that they were extracting minerals in Uganda, I think, and in African countries, yes, Congo, and that they extract a lot of minerals, and that was scary; there were wars."

Another participant added a fact about mineral scarcity: "They were taking them away because there was very little of that mineral—I can't remember the name now, but I know it's used in cell phones." (Student 3. Focus group with 5th grade children, 25 April 2025)

These connections enabled students to recognise that the knowledge acquired in school is closely linked to their own histories, those of their families, and the broader relations through which nations interact. Employing a strategy of 'deviation' to examine the impact and resilience of materials as a means of understanding contemporary colonial relations expanded students' global awareness and affirmed the value of their lived experiences within the school context. In this way, students came to understand that the questions and hypotheses developed throughout the inquiry-based science project could engage with social issues and interconnected realities, rather than functioning as neutral or value-free

forms of inquiry.

Through its strategy of deviation, EXPECT_Art introduced curricular interventions that complement and expand the scientific method, opening space for plural knowledge, perspectives, and histories of communities historically marginalised within hegemonic educational frameworks. In doing so, it cultivated a critical relationship with the material and social world, supporting students in understanding the operation of power and in envisioning more sustainable, equitable, and ethically committed futures. With this deviation, we also introduced an ethno-ecological perspective that resists separating science from the habitats and communities in which it is embedded. In this sense, the project resonates with Stengers' (2005) notion of cosmopolitics, which advocates situated and pluralistic engagements with scientific knowledge and its sociomaterial entanglements.

But this shift does not occur without tension. The teacher who accompanied the process narrated in the key incident emphasises that, despite acknowledging the openness of the materials towards the social, the objective of understanding how to 'measure' the resistance of the materials remained secondary:

"The area that worked least well was the more science-related part. Concepts such as impact measurements, gravity, and the effects of displacement on materials were not fully explored. Instead, hands-on activities took precedence, shifting focus toward artistic expression rather than scientific investigation. This lack of emphasis on scientific learning may limit students' understanding of material resistance." (Interview with the co- teacher of grade 5A, 8 April 2025).

This teacher acknowledged that measuring the impact of the materials was not thoroughly explored. He highlighted a key limitation in compartmentalised curriculum design: it impedes critical cultural education.

"Last year, I worked at a project-based school; we focused solely on projects and did not teach math or other subjects separately. Everything operated through projects, with many other aspects branching from that approach. I am confident in implementing competency-based learning with natural environment content. However, with social content, the school was stalled; we discussed it at grade levels and in staff meetings, but we couldn't make progress—we didn't know how. From here, you (the artist-researcher) helped introduce social-environment content into natural-environment learning." (Interview with the co-

teacher of grade 5A, 8 April 2025).

This challenge stems from viewing scientific questions as valuable without considering their social context. The project's 'deviation' revealed the need to decolonise the curriculum, balancing epistemic differences and recognising injustices, especially those linked to material exploitation between countries.
Despite these challenges, EXPECT_Art enabled teachers and students to recognise how their families' cultural and social contexts influence their understanding of the geopolitics of materials used in safer helmet designs.

Discussion

As part of a school-based science inquiry programme, students investigated the life cycle of twelve materials, tracing their trajectories from extraction to disposal. Through online research and direct engagement with physical materials, students classified them according to origin, recyclability, decomposition, and natural or artificial properties.
Introducing classroom materials prompted students to connect on a personal and cultural level. They shared family stories about reusing or recycling materials, such as cleaning with old clothing or witnessing plastic decomposition affected by the climate. These narratives highlighted the ways materials link to lived experience.
Through heuristic 'deviation' strategies and epistemological drifting processes, students were invited to critically engage with the cultural, historical, and material contexts that frame knowledge and power. This approach helped them understand ecology and material life through family, migration, and everyday practices that shape culture.
What makes the inquiry process presented in this article visible is that, decoloniality, at the school level, operates through a twofold movement: first, making explicit how hegemonic schooling tends to socialise subaltern students into cultural forms of citizenship that reinforce their silence and passivity (Darder, 2012); and second, opening spaces in the curriculum and school practices that recognize how coloniality affects knowledge, teachers' and students' positionalities. Based on this recognition, we can create spaces in which the knowledge of subordinate communities is recognized and valued as part of our common heritage. The notion-strategy of "deviation" offers a pathway to promote these spaces of recognition.
However, curricula—even in schools in which explicitly strive to celebrate students' and

families' cultural diversity—is often governed by obsolete content and rigid formats that remain unchallenged within the school's broader vision. Even when urgent or critical themes emerge, as with "Fem Ciència" (a project created to foster environmental awareness), compartmentalised and dominant teaching methods may restrict the development and visibility of students' cultural and critical expertise, since teachers have already defined the project's outcomes.

Contributions

Encouraging changes in the curricula challenges traditional learning environments and allows students and teachers to engage in culturally relevant processes that generate significant knowledge.

In this sense, decolonising practices in education means suggesting and developing deviations based on context-sensitive teachers' proposals. This turn enables students to actively challenge the notion of critical literacy as a shared irrefutable repository of cultural knowledge, and instead it promotes a reading of the world in its cultural, social, and political dimensions that help develop critical awareness of dominant narratives.

In this article, we have addressed the four objectives outlined at the outset by illustrating how the concept of 'deviation' has been introduced in a primary school as a gradual, non-impositional strategy to help decolonise the curriculum. Rather than being enforced on teachers, this approach becomes an organic part of their teaching practice. Our account of the 'key incident' illustrates how 'deviation' prompts curriculum shifts, fosters connections with the lived experiences of families and pupils, and creates productive tensions with established curricular frameworks. As a result, the stories and realities of pupils and their families have found authentic space in the curriculum, moving beyond superficial or tokenistic inclusion.

Departures from the standard curriculum were positioned as a decolonial strategy within school settings, introducing alternative ways to engage with curricular content and transforming both what students learn and how they learn it—particularly through the integration of art practices.

The deviations in the Fem ciència project emerged from students' experiences, languages, and realities, recognising their capacity to generate knowledge. This perspective contributed to the decolonisation of knowledge by positioning education as a process of collective empowerment, enabling students and teachers to critically engage with and

transform their social environment.

While our aim was to decolonise the schools' curricula in keeping with the core objectives of the EXPECT_Art project, this goal required close collaboration with each school and its staff. As a result, the process of decolonisation unfolded through collaborative curricular deviations. In the Materials Life Cycle case, these deviations were enacted as part of a scientific inquiry methodology—serving as opportunities to uncover and engage with diverse forms of cultural critical literacy. Furthermore, interactions with various local communities played a pivotal role in shaping and enabling these curricular shifts.

Finally, it is important to recognise that, while experiences of deviation may contribute to the decolonisation of the curriculum, they can also create tensions. This applies both to teachers' conceptions of what to prioritise to meet the needs of students from different cultural backgrounds and to how curriculum content is culturally contextualised. From this recognition, deviation is a first step in what is expected to be a long but necessary journey to a decolonised critical cultural education.

References

Anderson, G.L. & Irvine, P. (1992). Informing critical literacy with ethnography. In C. Lankshear and P. McLaren (Eds.), *Critical literacy: Politics, praxis, and the postmodern*, (pp. 81–104) State University of New York Press.

Argüello Parra, A. (2015). Pedagogía decolonial: Trazos para la construcción de un paradigma-otro desde la educación. *Correo del Maestro, Revista para profesores de Educación Básica*, 19(226), 28-37.

Banks, J. A. (2014). *An Introduction to Multicultural Education*. Pearson and University of Washington.

Bateson, G. (1963). Exchange of information about patterns of human behavior. In W. S. Fields & W. Abbott (Eds.), *Information storage and neural control* (pp. 173–186). Springfield, IL: Thomas Books

Bergin, L. (2002). Testimony, epistemic difference, and privilege. *Social Epistemology*, 16(3), 197213. https://doi.org/10.1080/0269172022000025589

Bernstein, B. (1975). *Class, Codes and Control: Towards a Theory of Educational Transmission* (Primary socialization, language and education). Routledge & Kegan Paul.

Boyd, D. (2014). *It's Complicated: The Social Lives of Networked Teens*. Yale University Press.

Canagarajah, S. (2023). A decolonial crip linguistics. *Applied Linguistics*, 44(1), 1–21. https://doi.org/10.1093/applin/amac042

Castro, A., Espinosa, G., Hernández, F., & Ruíz. M. (2025). *Report on Cultural Literacy in Arts Education in Schools and Local Communities in Spain*. WP 4 Arts Exploratorium. EXPECT_Art European Project.

Castro-Gómez, S. & Grosfoguel, R. (2007). *El giro decolonial. Reflexiones para una diversidad epistémica más allá del capitalismo global*. El Siglo del Hombre Editores.

Darder, A. (2012). *Culture and Power in the Classroom: Educational Foundations for the Schooling of Bicultural Students* (2nd ed.). Routledge. https://doi.org/10.4324/9781315635347

Edwards, A.T. (1984). Cultural literacy: What are our goals? *The English Journal*, 73(4), 71–2.

Fassett, D. L., & Warren, J. T. (2007). *Critical communication pedagogy*. Sage Publications. https://doi.org/10.4135/9781452225883.n5

Freire, P. (1993). *Pedagogy of the oppressed*. Continuum.

Giroux, H.A. (1992). *Border Crossings: Cultural workers and the politics of education*. Routledge.

Gremler, D. (2004). The Critical Incident Technique in Service Research. *Journal of Service Research*, 7(1), 65-89. https://doi.org/10.1177/1094670504266138

Hirsch, E.D. (1988). *Cultural Literacy: What every American needs to know*. Vintage Books.

León, M., & Albaigés, B. (Dirs.). (2024). *Anuari 2024: L'estat de l'educació a Catalunya*. Fundació Bofill. https://www.equitat.org/publicacions/anuari-2024-estateducacio-catalunya-pol94

Maine, F., Cook, V. & Lähdesmäki, T. (2019) Reconceptualizing cultural literacy as a dialogic practice. *London Review of Education*, 17(3), 383-392. https://doi.org/10.18546/LRE.17.3.12

Mignolo, W. (2003). Un paradigma otro: colonialidad global, pensamiento fronterizo y cosmopolitismo crítico. *Historias locales / diseños globales. Colonialidad, conocimientos subalternos y pensamiento fronterizo*, (pp. 19-60). Akal.

Montalti , C. (2024). The Body, the Earth. The Participation of Disabled People in the Environmental Discourse. *Journal of Ecohumanism*, 3(1), 31–43. https://doi.org/10.33182/joe.v3i1.3071

Morales, T. (2016). *Manual para maestros que lloran por las noches*, Gobierno de Guanajuato

Paraskeva, J. & Steinberg, S. (2016). *Curriculum: Decanonizing the Field*. Peter Lang.

Pohlhaus, G. (2017). Varieties of epistemic injustice. In I. James Kidd, J. Medina & G. Pohlhaus (Eds.), *The Routledge Handbook of Epistemic Injustice* (pp. 13-27). Routledge. https://doi.org/10.4324/9781315212043-2

Spivak, G. C. (2012). *An Aesthetic Education in the Era of Globalization*. Harvard University Press.

Stengers, I. (2005). The cosmopolitical proposal. In B. Latour y P. Weibel (Eds.), *Making things public: Atmospheres of democracy* (pp. 994-1003). MIT Press.

Tripp, D. (2011). *Critical Incidents in Teaching. Developing professional judgement*.

Roudledge.

Tukano, D. (2005). *Art and Indigenous Subjectivities*. Lecture. Barcelona Contemporary Arts Centre. 25 February.

Vergès, F. (2019) Capitalocene, Waste, Race, and Gender, *e-flux* #100, May. Retreved from: https://www.e-flux.com/journal/100/269165/capitalocene-waste-race-and-gender/

White, R. E. (2008). Above and beyond: Critical literacies for the new millennium. In K. Cooper & R. E. White (Eds.), *Critical literacies in action: Social perspectives and teaching practice* (pp. 21–36). Sense Publications.

Woodhouse, H.R. (1989). *Critical reflections on Hirsch and cultural literacy*. Interchange, 20(3), 80–89.

Zaman, Z. & Khawaja, U. A. (2022). Deviation from Recommended Curriculum and Efforts to Bridge the Gap Between Suggested and Taught Curricula. *Propel Journal of Academic Research*, 2(1), 26-36. https://doi.org/10.55464/pjar.v2i1.28

The authors acknowledge the financial support from the project EXPECT_Art – EXPloring and Educating Cultural Literacy through Art, which has received funding from the European Union’s Horizon Europe research and innovation programme under grant agreement Nº101132662.

To cite (MLA):
Hernandez-Hernandez, Fernando, et al. “Deviation as a Strategy to Decolonize the School Curriculum and Facilitate Students to Critically Read and Act Upon Their Environment.” *Nordicum-Mediterraneum*, vol. 21, no. 2, Jan. 2026, https://doi.org/10.33112/nm.21.2.2.