Article

Delearning capitalism: Is degrowth a decolonial perspective in social science education?

Mariona Massip Sabater, Mariona Espinet

Universitat Autònoma de Barcelona, Spain

Highlights:
– Capitalism is part of the colonial system, and growth is one of its ideological principles.
– Critical views on growth and capitalism are related to more critical PBL projects.
– Supporters of degrowth are closer to decolonial perspectives in education.

Purpose: We aim to locate degrowth approaches within decolonial social science education and to establish relationships between economic beliefs in the social representations of future teachers and their educational projections.

Design/methodology/approach: Theoretical approaches are developed to pinpoint the topic and focus on teachers' imaginaries concerning economic notions such as *growth* and *degrowth*. The social representations of teachers in training are analysed to explore their epistemological, formal, and decision-making implications.

Findings: Critical views on growth and capitalism are related to acknowledging alternative economic paradigms and to a more critical, complex, action-oriented and justice-oriented projection of educational PBL. Supporters of degrowth are closer to decolonial perspectives in education.

Practical implications: We should revise teacher training programmes to better train future teachers in decolonial perspectives. More emphasis on colonial and structural cause-effect complex dynamics of capitalism in socioenvironmental problems is required. The hegemony of neoliberal collective imaginaries should be questioned through social, historical and economic narratives.

Corresponding author:
Mariona Massip Sabater, G5-103, 08193 Bellaterra, Barcelona, Catalonia (Spain)
Email : Mariona.Massip@uab.cat

Declaration of conflicts of interests: No potential conflict of interest was reported by the authors.

1   INTRODUCTION

A new school year is beginning, and teachers in Catalonia's public primary and secondary schools are ready to implement their new reworked projects. They are reflective teachers, critical of their own practice, and have reviewed some of their projects to ensure they are sensitive regarding gender and racial perspectives and attempt to overcome eurocentrism.

Critical heritage education appears to be a good starting point for them, and they are convinced that problematising colonial heritage and narratives is useful. However, when attempting to understand how colonial structures work, the concept of *triangular trade* always makes an appearance. Whether teachers use textbooks or self-made resources based on digital material, the image to explain colonial economic relationships is often the same: a triangular line on a Mercator projection map covering "products", including sugar, slaves, and textiles (Figure 1).

Figure 1. Examples of digitally accessible material on the *triangular trade*
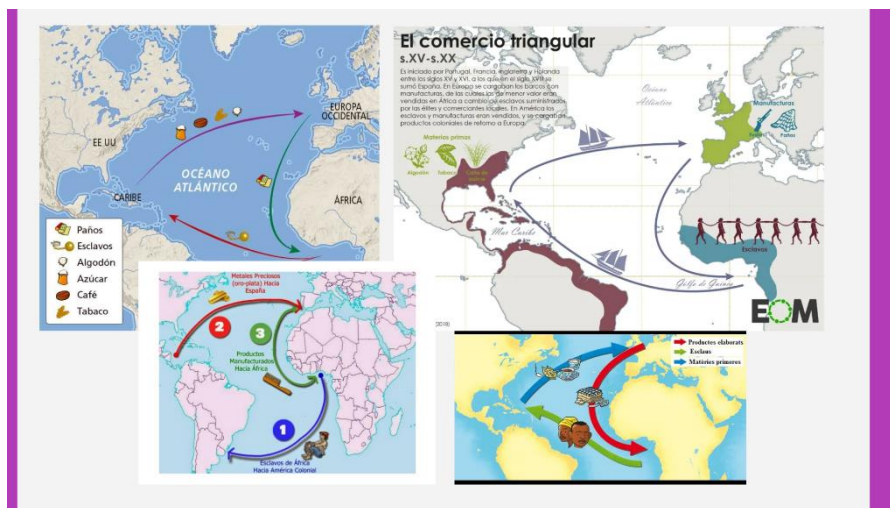
Source: Shared materials from a seminar on "delearning slavery", given at the UB, March 2024.

The official narrative is clear: a map projection that is racist and conditions our understanding of the world and our place in it. A conceptual narrative is being repeated, which is normalising human trade among goods trade, which is dehumanising humans by saying they are *slaves* (not *enslaved* or *stolen people*) and treating them as if they were the same as sugar. Resources being plundered from colonised lands are being legitimated. And we are historically and economically normalising life becoming commodified.

As Stein et al. (2021, p. 3) point out,

> Despite growing interest and enthusiasm about decolonization, many non-Indigenous people are unsure of how to approach it in practice in their own contexts. This can lead them to feel immobilized or, worse, to reproduce harmful colonial practices without realizing that they are doing it.

Awareness of the ideological implications of social science discourse is fundamental and urgent. Even when we are aware that the political weight behind language and historical and anthropological school narratives has been questioned, economic notions are still believed to be neutral. Concepts such as *progress*, *development*, or *growth* are ideologically ingrained beliefs strongly present

in social knowledge narratives, and they have been referred to as *unquestioned dogma* in social studies education (Adams, 2019).

Can we decolonise sociohistorical points of view if the ideological, economic, and modern basis for the organisation of colonial relationships is not questioned at all? Can we replace the concept of *discovery* without introducing *territorial dispossession* or *the commodification of life*? How many STEAM projects on the climate crisis and sustainability are being undertaken using planned obsolescence laptops made using coltan extracted by enslaved children. At the same time, students attend their Social Science lessons where they talk about *developed countries*, *GDP*, *progress*, and *economic growth*?

Since teachers are the ultimate curricular specifiers and key agents in decolonising education, the research presented here explores future teachers' social representations of economic concepts, focusing on a modern/colonial cornerstone concept, such as *growth*, and a decolonial one, such as *degrowth*, to discover the implications with curricular decision-making.

2 THEORETICAL FRAMEWORK – DEGROWTH AS A DECOLONIAL PERSPECTIVE IN SOCIAL SCIENCE EDUCATION

Why is degrowth considered to be a decolonial perspective? Why should degrowth be a key concept in decolonial education? This paper does not aim to define or delimit the decolonial perspective or education but to describe our approach to this phenomenon. We support approaches which recognise "how deeply colonial patterns are embedded in [our] minds, bodies, relationships, and institutions" (Stein et al., 2021, p. 3), something that we, as white people, underestimate.

2.1 Decolonial Education

It is important to highlight the marginal dynamics of decolonial and decolonial education approaches from resistance to coloniality and modernity, from every time students said, "That's not my history!" (Tinkham, 2013), and every time teachers have committed to them. As Stein et al. (2021, p. 3) explain, "current interest in decolonisation is largely due to the labour of Indigenous people who have continuously resisted the hegemony and universality of Western education".

In a Western context, educational trends that identify with the critical pedagogies of Freire, Apple or Giroux have undergone a qualitative change through contact with poststructural, feminist and decolonial theories, which have made evident the complexity and depth of power relations. Decolonial thinking has been understood to be a "particular kind of critical thinking" (Mignolo, 2007b, p. 155) and even a critical review of critical theories concerning their capacity to dismantle power relationships related to gender constructions (hooks, 1994) or capitalist dynamics (Santos[1] (2019).

Capitalism, patriarchy and colonialism – Quijano's (2000) *Colonial Matrix of Power* – are systems of oppression that function articulately and share the same dynamics of domination, which

---

[1] Theoretical contributions of Boaventura de Sousa Santos are considered due to the importance they have had in the epistemic decolonial turn (Grosfoguel, 2007) of the authors. The author has been accused of sexual and power abuse. If he has appropriated the bodies and ideas of scholars, students and colleagues – specially women's', he has reproduced the oppression systems he has criticized. We totally denounce and reject this behavior, which would call into question the coherence and authorship of his ideas and reminds us that oppression systems can be reproduced in every life's sphere.

appropriate, exploit and commodify life (Figure 2; e.g., Herrero, 2013; LasCanta, 2017; Taibo, 2010). In ecofeminist approaches, anthropocentrism would join this list (Iovino, 2010).

Figure 2. Ecofeminist slogan
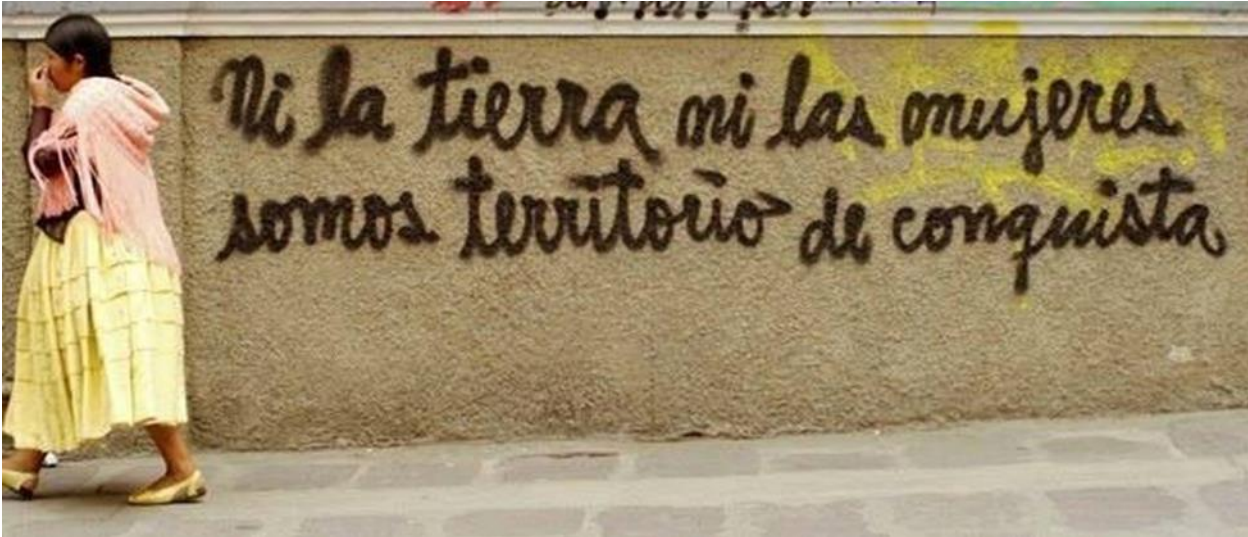
Source: [Neither land nor women are territory to be conquered] Ecofeminist slogan. In Abya Yala, indigenous, ecological, and feminist activism are strongly aligned. Image: ElSalto.

There is a growing social and epistemological consensus in pointing out these integrated dynamics and placing them on the foundations of modernity and the oppression mechanisms of the current global neoliberal system. Other perspectives defend not only the *articulated power* thesis but also explain how the colonial system comprises different economic, political, epistemological, ecological and relationship systems such as capitalism, nation-state imperialism, universal knowledge, extractivism and individualism (Stein et al., 2021).

The *Colonial Matrix of Power* (Quijano, 2000) generates power relations that materialise from their exercise and concrete actions and generate exclusion and discriminations that, on the other hand, reinforce this power and legitimise violence committed against people, lives, bodies, and resources. They all share "an ideological paradigm of domination in which a Master subject – whether man, human, industrial, coloniser – tries to possess, domine or annihilate another – whether a woman, nature, worker, land or culture" (Iovino, 2010, p. 36), thus women, non-white people and non-European people are "cast as not-quite-fully-human, to legitimise dispossession, enslavement and exploitation" (Hickel, 2021, p. 2, based on Federici, 2004).

These power relations produce knowledge. Knowledge that legitimises exclusion and power relations (Butler, 2004; Foucault, 1982). Quijano (2000) identifies both knowledge (epistemology) and education as key tools in the colonial matrix of power to control subjectivity. As Garcés (2020) points out, the relationship between knowledge and power is only valuable because of its emancipatory effects. Learning processes, then, include delearning, deconstructing and reconstructing, questioning and, in hook's (1994) words, *transgressing* oppressive powers (Figure 3).

Figure 3. The reproductive and transformative dynamics of colonial oppression systems in schools.
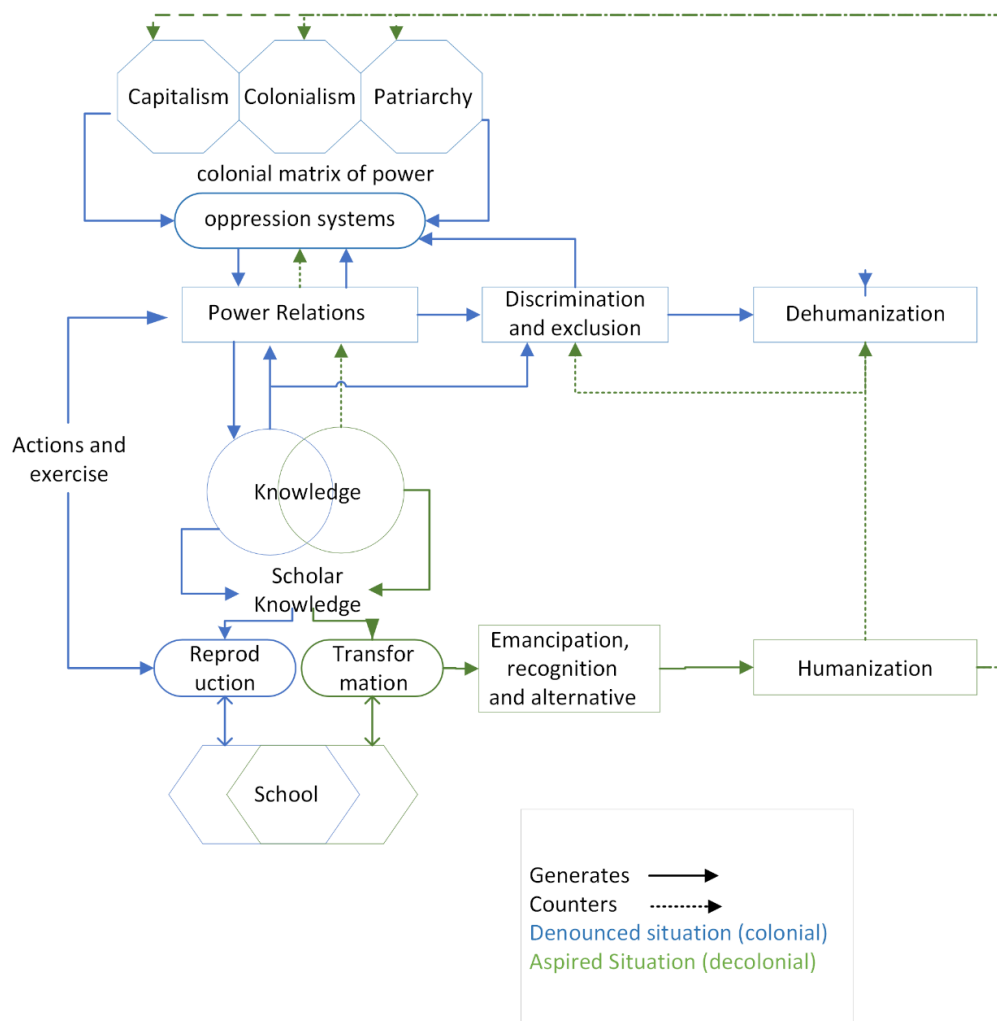
Source: Based on Massip Sabater's (2022) framework on humanising social science education.

2.2. Decolonial approach to social science education

Knowledge from any field carries power relations and colonial biases, and so does school knowledge. We cannot escape epistemic violence (Spivak, 1988), not even when trying to place ourselves within decolonial, feminist and critical approaches. However, above all, knowledge in social science education has played a key role in transmitting neoliberal patterns (Ajaps, 2023) – and plays a key role in decolonising them.

Increasing educational, social and institutional interest to "address their historical legacies and ongoing perpetuation of colonization" (Stein et al., 2021, p. 3) is currently evident. When thinking about decolonising social science education, historical knowledge is mainly used since historical narratives are highly political (Brett & Guyver, 2021; Earle et al., 2016), and the history curriculum is the first to be reconstructed when facing decolonial processes (Brett & Guyver, 2021; Fairbanks, 2022).

Our concern in this case is not only the historical narratives taught and learned in schools - which also imply social, political, and economic narratives- but the making of historical consciousness. We are occupied with how social science education shapes the framework by which we judge not only what types of human and social realities are normal, natural, or acceptable but also those that are *possible*.

Degrowth as Decolonial

Alternative ways of being are conceptualised in a Pluriverse dimension, thus countering the hegemonic and global narrative of human and social experience through colonial powers. Degrowth is one of the many paths to a social transformation prioritising empathy with human and non-human beings. These visions "stand firmly in opposition to both xenophobic nationalism and technocratic globalism (...) [and] appear to have reached all corners of the world" (Kothari et al., 2019, p. xvi).

It is pertinent to accurately identify the context of those many decolonial paths and locate situated knowledge (Haraway, 1988). Degrowth horizons have been woven into the Global North. As Hickel (2021) points out, on some occasions degrowth has been accused of being a preoccupation of middle-class environmentalists in the Global North, which cannot connect with working classes and social movements in the Global South (Huber, 2021).

Nevertheless, our starting point is to represent degrowth movements as decolonial: Capitalism is the economic system of colonialism, "which is reproduced through racialised and gendered forms of exploitation; and exploitation of humans, as well as extraction of other-than-human beings" (Stein et al., 2021, p. 12). There are debates and disagreements about whether growth is inherent in capitalism or whether capitalism can exist without growth. In any case, there is an unquestionable relationship between the two of them, whether for historical or contingent reasons (Andreucci & McDonough, 2015). Capitalism is pointed out to be intrinsically destructive (Picchio, 2015), something Rigoberta Manchú (Burgos, 1983; Riis-Hanse, 1993) demonstrated in her question: *How many humans have been sacrificed to the Gods of Capital in the last five hundred years?*

Growth has been identified as the root cause of the capitalist and neoliberal dynamics that involve ignoring the biophysical boundaries of ecosystems (D'Alissa et al., 2015; Kallis, 2019). Mignolo (2007a) goes further, identifying *growth* as part of the rhetoric of modernity (coloniality), along with *progress* and *development* (Bhambra, 2014). We stand with those who identify degrowth and capitalism as incompatible (Latouche, 2012; Taibo, 2010). Degrowth, then, is threatening the foundations of colonialism by threatening capitalist statements. According to De Sousa Santo's e*pistemologies of the south* notion, decolonial ideas and knowledge emerge from the experiences of those who denounce colonialism, capitalism, and patriarchy; and articulate, defend and construct alternative possibilities. If we use this notion, degrowth is understood to be decolonial since it is an anticapitalist movement building non-capitalist alternatives.

However, whether we use the *epistemologies of the south* notion or not, Hickel (2021) points out that "degrowth is a demand for decolonization". This author explains that "economic growth in the North relies on patterns of colonization" as "the Global North is responsible for 92% of emissions in excess of the planetary boundary" (p.1). At the same time, the consequences of climate breakdown fall disproportionately upon the Global South. In addition, high consumption levels in the Global North depend on the appropriation of land, bodies and labour hours from the Global South (Dorninger et al., 2021; Hickel, 2021). As Hickel explains:

> Degrowth, then, is not just a critique of excess throughout the Global North; it is a critique to the mechanisms of colonial appropriation, enclosure and cheapening that underpin capitalist growth itself (...). In the face of ecological breakdown, solidarity with the South requires degrowth in the North (...) Degrowth is, in other words, a demand for decolonization. (p. 1)

There are different intellectual currents within the degrowth movement, and they all share one vision: unlimited growth and accumulation are neither possible nor desirable in a finite world (Andreucci & McDonough, 2015). Demaria et al. (2013) explained degrowth movements this way:

> Generally, degrowth challenges the hegemony of growth and calls for a democratically led redistributive downscaling of production and consumption in industrialised countries as a means to achieve environmental sustainability, social justice and well-being. (...) On one side, degrowth is the reduction of energy and material throughput (...) On the other side, degrowth is an attempt to challenge the omnipresence of market-based relations in society and the growth-based roots of the social imaginary (...). It is also a call for deeper democracy, applied to issues which lie outside the mainstream democratic domain, like technology. Finally, degrowth implies an equitable redistribution of wealth within and across the Global North and South, as well as between present and future generations. Degrowth sees itself as an ally of the global environmental justice movement with strong roots in the South. It applauds initiatives such as the Yasuni ITT proposal in Ecuador and other similar attempts to 'leave oil in the soil, coal in the hole', South or North. (p. 209)

As Hickel (2021) explains, "capitalism is predicated on surplus extraction and accumulation; it must take more from labor and nature than it gives back (...) such a system necessarily generates inequalities and ecological breakdown" (p. 2). Agreeing with ecofeminist approaches, interdependence and ecodependence are essential conditions in human life and societies (Herrero, 2013). The current socioeconomic system is designed to be built against them both – and so is built against life systems and dignity.

If we look at who is facing the consequences of these inequalities, the organisation of capitalism, colonialism and patriarchy becomes evident once more. The disproportion between the generation of causes and the suffering of the consequences in terms of inequalities in the socio-economic system increases among women, racialised people, and the inhabitants of the Global South (Figure 4).

Figure 4. The iceberg model of capitalist patriarchal economics
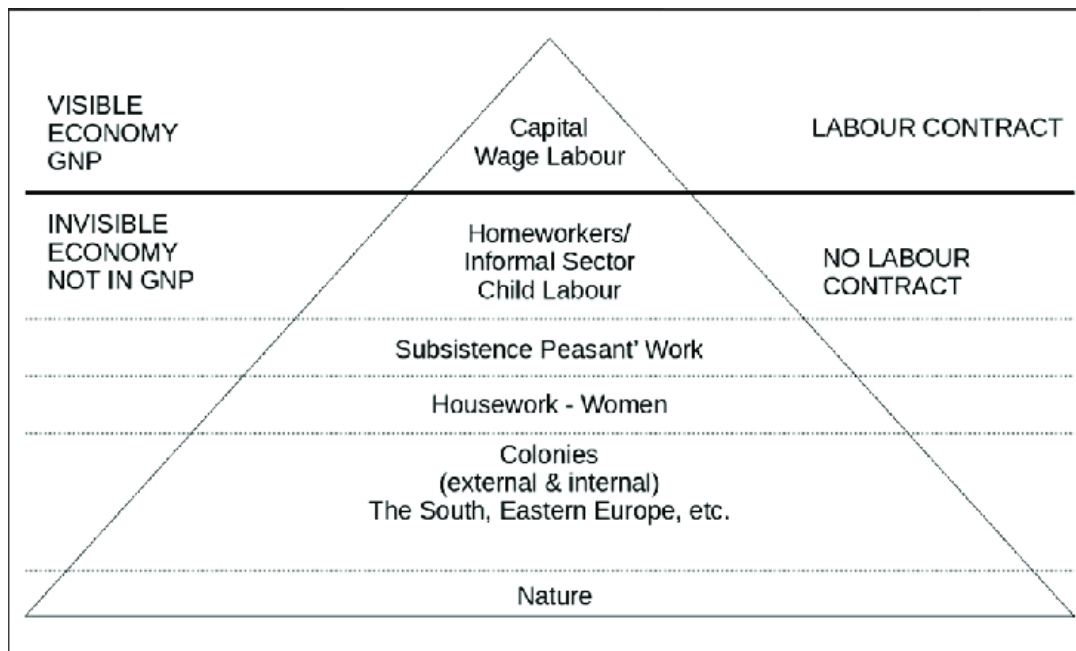
Source: Mies & Bennhold-Thomsen, 1999.

Decolonising socio-economic imaginaries

Latouche (2015) defends that ideas such as *growth*, *development,* or *progress* are economic beliefs – the same concepts Mignolo (2007a, 2011) identified as the basis of colonial rhetoric. Quijano (2007) argues that coloniality of power has been strongly associated with the coloniality of knowledge and imagination. Overcoming these concepts means decolonising our social imaginary.

For Castoriadis (1975), this should be the biggest revolution: it requires deep changes in psycho-social structures among Western people, their life attitudes, and their social imaginary. Those structures, life attitudes and imaginaries are identified by Herrero (2013) as the mental representations by which we understand and act in the world; they go against the functioning of the physical world and living systems and have become contemporary myths. And here is where decolonial educational approaches play a key role. Decolonising imaginaries related to capitalism, growth, progress or development requires questioning, analysing, unlearning, reimagining, reconstructing, rejecting, opening, listening to, colearning, relearning, coimagining, reimagining.

Pashby and Costa (2021, p. 388) explain how "critical engagements with global citizenship education provide possibilities to decenter the modern/colonial imaginary and uncover knowledge-making processes that (...) perpetuate western dominance". And it is this *decentering modern/colonial imaginary* we would like to focus on for now, as it matches the degrowth conception of "decolonising imaginaries" (Latouche, 2015). According to Ahenakew (2016), decolonising social imaginaries is the most underestimated challenge.

According to Feola (2019) unmaking capitalist imaginaries (1) is a combination of situated processes, (2) involves both symbolic and material deconstruction, (3) is a contradictory personal experience, (4) is often hidden, but can be used strategically, and (5) is generative. It requires us to be aware of how capitalist, patriarchal and colonial imaginaries and actions are reproduced within the educational system by relationships, expectations, and knowledge. Particularly social science knowledge, which has been identified as one of the main transmitters of neoliberal imaginaries (Ajaps, 2023).

According to Shanks (2019), educators who use neoliberal frameworks without mentioning alternatives are being shortchanged. This requires changes in imaginaries, and there are concerns about whether we can "unlearn the normality of commodification and consumerism" (Lupinacci et al., 2018). Nevertheless, economic knowledge and narratives in education have not been targeted enough so far. Prevailing assumptions in economics education are founded on the neoclassical paradigm (Fine, 2008; Freeman, 2010; Shanks, 2019), where neoclassical tradition has become synonymous with economics (Adams, 2019). So-called scientific neutrality has been used to legitimise the reproduction of ideologies, and the assimilation of neoclassical economics into the economy works this way. Shanks (2019) explains how "a failure to move beyond neoclassical economics is a failure to expose fundamental components of inequality and may inhibit action in social studies classes to address injustice" (p. 587).

Neoclassic economics is accused of functioning as an orthodox, unquestioned dogma and a hegemonic doctrine (Herrero et al., 2019; Shanks, 2019). Beliefs in economic education based on neoclassical assumptions are current topics that lead to controversy and debate (Löfström & Weber, 2022).

Ecological critics of the neoclassical economy focus on its (1) physical dissociation, its (2) reduction to the monetary sphere and the (3) ethics of its principles, with growth and production as the ultimate aims (Herrero et al., 2019). Furthermore, neoclassical economics "attends to issues of race, class and gender" but it does not analyse inequalities. At the same time, they are attributed "to

variables like luck, human capital, occupational choice, and skill variance rather than factors like discrimination, segregation, or inequality of opportunity" (Feiner & Roberts, 1999, p. 43).

According to Freeman (2010), pluralising paradigms in economics education can lead us to a wider overview of the economy and to understand it as "how societies organize themselves to sustain life and enhance its quality" (Nelson, 2011, p. 11). Degrowth approaches rest on ecological economics paradigms (e.g., Bockstael et al., 1995; Herrero et al., 2019), the feminist economy (e.g., Picchio, 2015; Shanks, 2019) and the new economy (e.g., Jackson, 2015), as well as on epistemologies of the South such as *Buen Vivir* (Gudynas, 2015). Nevertheless, none of these perspectives have fully entered the social science curriculum, not even through the Sustainable Development Goals (Rodríguez-Marín et al., 2020). And even when they have, as curricula in some countries incorporate ecosocial competences, teacher's lack of familiarity with economic disciplines and paradigms (Shanks, 2019) reduces their ability to make proper curricular decisions and question economic modern/colonial imaginaries.

3. METHODOLOGICAL FRAMEWORK

This research project began after a seminar on Education & Degrowth held at the Universitat Autònoma de Barcelona (UAB). The activity from which the data was collected was part of exploratory and introductory lectures on three different courses at the Faculty of Education. Answers were individual, but the groups of students shared and analysed the results. The ideas and thoughts that arose from this exercise became part of subsequent lecture stages involving conceptual structures.

3.1. Objectives

The main aim of this research is to analyse future teachers' social representations of economics notions and the impact on their curricular decisions. It also aims to explore the relationship between colonial/decolonial imaginaries and educational opportunities concerning the economic dimension of social science education.

In this case, we analyse social representations of economic concepts, specifically the notions of *growth* and *degrowth*, using Abric's (2001) and Mora's (2002) conceptualisations of *social representation.* Our objectives are as follows:

- To identify content, structure and attitudes attributed to social representations of *growth* and *degrowth.*

- To compare economic and social representations with Problem Based Learning (PBL) curricular decision-making.

- To explore the implications of decolonising education.

3.2. Method

An online form on exploratory and introductory activities within teacher training lectures was used. It was divided into two main blocks: economic notions and curricular decisions in PBL projects based on social and socioenvironmental problems. Both blocks included open and closed questions to explore content, structure, and attitudes towards them (Table 1).

Open questions were always formulated and answered before closed questions to ensure no conceptual specificities were influenced by our proposed concepts and notions.

Table 1. Research Instrument Blocks and Structure

	Block 1: Economic Notions	Block 2: Social and Socioenvironmental Problems
Content and Structure	If I say you say Conceptual attribution to 17 different economic concepts from neoclassical economics and ecological economics. Open answer.	2.1. Imagine your lectures Specific topics on curricular decision-making for PBL based on social and socioenvironmental problems. Open answer.
Attitude	Positive or negative? Evaluation of the 17 proposed concepts using closed options (1) negative; (2) positive; (3) I wouldn't know.	2.2. What kind of problem? Evaluation of 14 different overall problems using closed options: (1) social problem; (2) environmental problem; (3) socioenvironmental/eco-social problem.

3.3. Sample

The sample consisted of 95 students from three different Faculty of Education subjects in the UAB during the courses 2020/2021 and 2021/2022, lectured by members of the Education & Degrowth Seminar. All of them were informed and agreed to use the data for research purposes, and 20% agreed to receive feedback about the results and publications.

The students took one of the following courses: *Research and Innovation in Social Science Education* (34; 35,5%) taught as part of the Bachelor's Degree in Primary Education with no environmental or economic education involved; *Education, Sustainability and Consumption,* from the Bachelor's Degree in Pedagogy (19; 20%), with partial environmental and economic education involved, and *Environmental Communication and Education,* from the Bachelor's Degree in Environmental Sciences (42; 44,5%), with strong environmental educational development. The specific subject is irrelevant to the data analysis, but we need to analyse whether prior education makes any difference.

Intersectional analysis (Crenshaw, 1989; Davis, 1981) was ruled out as there was no significant racial or ethnical diversity. The gender perspective was used to analyse the data. 66% of the participants identify as women, 31% as men, and 3% as non-binary.

3.4. Data

Both quantitative and qualitative data were managed in this research project. No AI tools were used for this process.

- Quantitative data – Was analysed using descriptive statistics and correlative calculations, guided by Vilà and Bisquerra's phases (2019): (1) initial exploration; (2) bivariate analysis, and (3) multivariate analysis. The gender perspective was applied for the bivariate and multivariate analysis.

- Qualitative data – Was analysed through open coding. Open coding follows Braun & Clarke's (2006) method in terms of thematic analysis.

The development of the research project and the data processing was governed by the UAB Code of Good Practice in Research. Examples of participants' responses were anonymised using a numerical code: FT number = Future Teacher + number (1–95). They will be shown in their original formulation in Catalan and then translated by the authors.

The results emerging from this research are contextual and non-representative but useful for decision-making for educational programmes in terms of lecturers and planning and exploring ideas worth looking at in greater depth in future research.

4   RESULTS

4.1.   Content of the growth and degrowth social representations: qualitative conceptual analysis

Participants were asked to briefly explain what came to their minds when asked about the concepts of *growth* and *degrowth*, among other economic terms. Money was the most cited concept in the participants' social representation of *economics* since it constituted 30% of the entire sample, and 70% of the answers were identified as neoclassical (44%).

The main representations of *growth* were related to *income increase*, *wealth*, and *profit*. However, there is a marked polarisation of meaning concerning this concept. Some of these meanings are related to progress and increased profit (53%); others are highly critical of the capitalist economic model (36%; Table 2).

Table 2. Proportions and examples of "growth" categorisation

| Category	%	Response Examples
Wealth Increase	53%	
• Wealth	5%	*Riquesa* [FT18; Wealth]
• Increase (of goods, money, profit)	36%	*Increment dels beneficis pel que fa al capital* [FT11; Increase of profit in relation to capital]
• Development/Prosperity	7,5%	*Beneficis econòmics i desenvolupament* [FT50; Economic profit and development]
• Welfare	4,5%	*Benestar* [FT12; Welfare]
Critical Visions of the Capitalist Model	36%	
• Unsustainability	4%	*INSOSTENIBLE* [FT61; UNSUSTAINABLE]
• Capitalism	8,5%	*Capitalisme, avaricia* [FT34; Capitalism, greed]
• Inequalities	6,5%	*Desigualtat Global* [FT68; Global Inequality]
• Cause of several problems	4%	*Multinacionals, pollució, generador d'un sentiment de compra impulsiva, genera insatisfacció personal i social* [FT79; Multinationals, pollution, generator of impulsive buying, leading to personal and social dissatisfaction]
• Failure/Fallacy	4%	*Fallàcia* [FT86; Fallacy]
• Other	9%	*Colonialisme* [FT80; Colonialism / Inflation]
Other	8%	*Canvis* [FT80; Change] / *Inflació* [FT58; Inflation]
No answer	3%	

The degrowth concept, on the other hand, seems to be more complex since the polarization is not as evident. There is much more analysis, description, and evaluation (Table 3). However, concepts with a significant semantic load do arise, such as *justice, sustainability, life, utopia, future, catastrophe,* and *drop.*

Table 3. Proportions and examples of "degrowth" categorisation

Category	%	Response Examples
Decrease	41%	
• Decrease	14,5%	*Disminució* [FT49; Decrease]; *Reducció* [FT77; Reduction]
• Economic Downturn	9,5%	*Utilitzar menys recursos* [FT55; Use fewer resources]; *Disminució de béns i serveis* [FT16; Decrease of goods and services]
• Economic Negative Scenario	17%	*Catàstrofe* [FT61; Catastrophe]; R*ecessió* [FT91; Recession]
Future	34,5%	
• Reaction/Alternative to the current system	14,5%	*Conseqüència del creixement econòmic* [FT90; Consequence of economic growth]; *Única alternativa. Estem obligats a decréixer sí o sí* [FT80; Our only alternative. We are forced into degrowth]
• Sustainability	9,5%	*Arribar a l'equilibri entre l'activitat econòmica i la natura* [FT14; Achieving a balance between economic activity and nature]
• Necessity	10%	Necessari per a seguir existint [FT88; Necessary to continue existing];
Applicability	7,5%	
• Non-applicable	5,5%	*Manca de programes eficients* [FT7; Lack of efficient programmes]; *Ara per ara inviable* [FT36; Currently unfeasible]
• Applicable	2%	*Aplicable* [FT87; Applicable]
Other	10,5%	*Justícia* [FT44; Justice]; *Ecofeminisme* [FT72; Ecofeminism]; PIB [FT3; GDP]
No answer	7,5%	

Critical visions of economic *growth* greatly impact students who have been instructed in environmental education, as they represent 94% of critical visions of capitalist models emerging from economic *growth* while also representing 64,5% of the sample, with a variation of up to 30 points. Informed visions on *degrowth* are also higher among them. Instruction, then, seems to be a significant variable that shapes social representations of the concepts of *growth* and *degrowth.* Gender, on the other hand, has no significant impact on *growth* and *degrowth* perspectives in this case, nor in other economic terms. There is just one economic concept in which gender has appeared to be a significant variable in students' responses: household chores (Figure 5), which demonstrates how gender identity influences the representation of economic realities based on a clear historical gender gap.

Figure 5. *Household chores* **social representation – gender variable analysis**
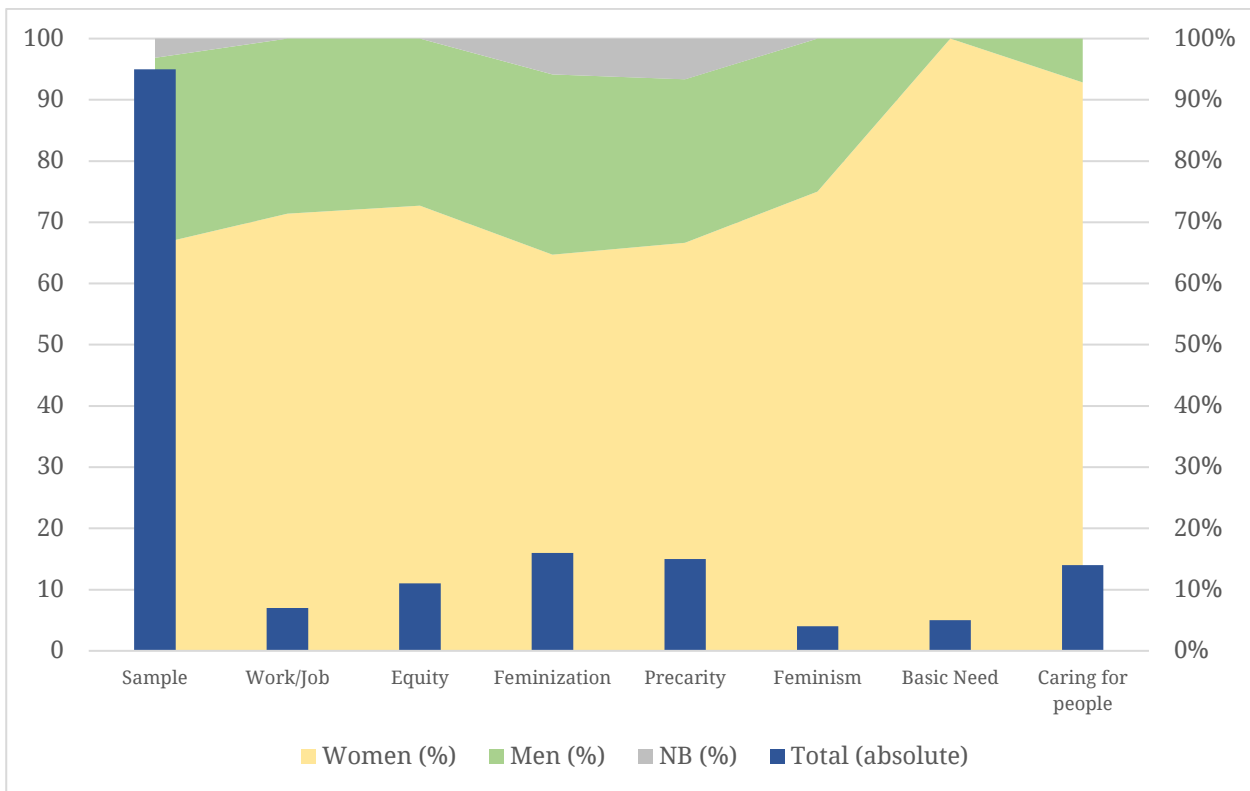

4.2. Structure of the social representations of growth and degrowth – conceptual relationships

Open definitions were analysed by establishing conceptual relationships between them. In this case, we were exploring the presence of preestablished economic words in open definitions (Figure 6) Positive semantic relationships (descriptors, synonymy, causes, consequences) were differentiated from negative semantic relationships (antonyms, negation, opposition). Only explicit terms were considered, not implied meanings.

Participants explicitly related *growth* to *capitalism* and *economy* (≥10%), *wealth* (7,5%) and *inequalities* (7,5%). They also related it to *life* -in *life quality* (3%) and *needs* (≤3%). They negatively associated *growth* with *sustainability* (≤3%), ecology (≤3%) and life (≤3%).

In the case of *degrowth*, this was positively defined in connection with *needs* (6,5%), *sustainability* (5%) and *recession* (4.5%). *Economy* was referred to with positive and negative associations (4%; 4%) concerning *degrowth* representations. It was also negatively associated with *capitalism* (≤3%) and *growth* (≤3%). Other words repeatedly appeared in open definitions, such as *resources, goods, services, nature, planet, power and exploitation.*

Figure 6. Conceptual relationships between closely chosen concepts to *growth* and *degrowth* open representations.
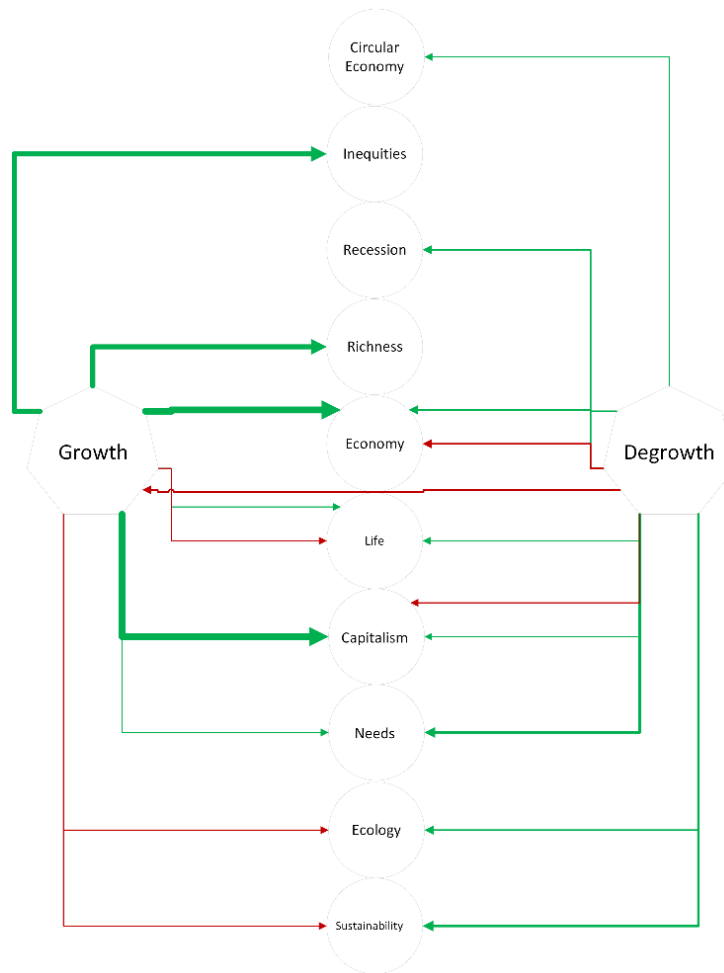
Other representations showed interesting nuances without the same evident polarisation. Poverty, for example, was a clearly negative concept with mainly two types of representation: those related to a lack of money and those related to a lack of coverage for essential needs. Inequalities were defined based on descriptive views of differences and imbalances and from a more critical perspective of injustice and privileges.

Representations of *Needs* followed a similar pattern. We found some descriptive explanations related to biological and social needs, others questioning the relationship between desires and needs created, and others emphasising human dignity. *Life* was also approached from more biological definitions, with more philosophical approaches related to decent life, dignity, and *"el buen vivir"*.

Finally, other concepts had more homogeneous representations. The c*limate crisis* was basically linked to *urgency* and *current and relevant social problems,* in which most critical visions were related to capitalism and human action. *Sustainability* was basically linked to *balanced relationships* and *the future*. *Ecology* was mainly understood as the relationship between living beings and the environment. It is noteworthy that *Capitalism* representations also share homogeneous and negative meanings, in contrast to its implicit implications such as *Economic Growth.*

4.3. The attitude component concerning the social representations of *growth* and *degrowth* – quantitative growth/degrowth polarisation

Participants were asked to rate different economic concepts using a binary dichotomy: positive / negative / I wouldn't know. Some concepts were positively considered or negatively considered almost unanimously. This was the case with *sustainability* and *ecology* as positive concepts (≥90%) and with *poverty*, *inequalities* and *climate crisis* as negative ones (≥90%).

Other concepts were strongly polarised: *economic growth*, *need*, *degrowth*, or *subsistence economy* had balanced positive and negative attributions. This polarisation was coherent with open conceptual attribution (4.1.) and polarisation through concepts with obvious semantic loads, which perfectly matched negative or positive attributions. In addition, there was a clear correlation between the evaluation of the *economy* and *economic growth*.

There is a clear connection between the attitudes related to these concepts and their content (Table 4). This made us think about the importance of linguistic decisions when using different terms and concepts.

Table 4. Relationship between content and attitude in relation to polarised concepts.
Growth and Degrowth as examples

Object of Social Representation	Polarised Content	Attitude
Growth	Wealth [FT1]; more jobs [FT3]; welfare [FT12]; prosperity [FT36]; increased property [FT81]; stability [FT85]	Positive
	Lack of sustainability [FT7]; colonialism [FT20]; failure [FT24]; destroying nature to enrich ourselves [FT31]; exploitation [Ft 73]; prioritising capital above life [FT80];	Negative
Degrowth	Bankruptcy [FT1]; defeat [FT5]; setback [FT54]; unfavourable situation [FT14]	Negative
	"Utopia" [FT26]; "earth salvation" [FT38]; "necessary" [FT24]; "a way to achieve sustainability" [FT30]	Positive

Some concepts presented a high level of indeterminacy (≥30%): *economy*, *wealth*, *recession*, *household chores*, *food sovereignty*, and *needs*. Two different types of indeterminate relationships were found: those coming from a lack of knowledge or unfamiliarity (e.g., *recession; food sovereignty*) and those coming from merely descriptive issues, which could indicate a lack of reflective deliberation about them. This was the case for concepts such as *needs* or *economy*: they are familiar to future teachers, but they might not have been discussed or pondered critically and reflectively.

Growth and *Degrowth* were evaluated in a very polarised way (Table 5).

Table 5. Degrowth and Growth polarisation. Quantitative evaluation by %.

	Degrowth	Growth
Positive	40%	47,5%
Negative	41%	35,5%
I wouldn't know	19%	17%

The polarisation was evident here since most students understood *growth* and *degrowth* to be in opposition (46; 48%), although a significant number of them could rate one concept but not the other (29; 31%). Some participants (19%) found them compatible as they were considered both positive (11) and negative (7).

No significant gender biases were found, but formal ones: students who had received previous environmental education were more likely to be critical of *growth* and to consider *degrowth* positively. Those who hadn't were more likely to consider *growth* positively and *degrowth* negatively but also to find themselves incapable of evaluating the concept. If we categorise the students by their *growth-degrowth* polarisation, we find the following (Table 6, Figure 7):

Table 6. Participants' inductive categorisation through *growth/degrowth* polarisation

Main Category	Inductive Category	Meaning	n
Degrowther[2]	Radical Degrowther	Positive Degrowth, Negative Growth	22
	Moderate Degrowther	Positive Degrowth, Don't Know Growth	4
Non-polarised	Indeterminate with negative growth	Don't Know Degrowth, Negative Growth	4
	Indeterminate	Don't Know Growth, Don't Know Degrowth	2
	NA	No Answer	5
	Negative Compatibility	Negative Degrowth, Negative Growth	7
	Positive Compatibility	Positive Degrowth, Positive Growth	11
	Indeterminate with negative degrowth	Don't know Growth, Negative Degrowth	8
Growther	Moderate Growther	Positive Growth, Don't Know Degrowth	11
	Radical Growther	Positive Growth, Negative Degrowth	21

[2] Degrowther = Degrowth supporter / Growther = Growth supporter

Figure 7. Categorisation of participants through *growth/degrowth* polarisation
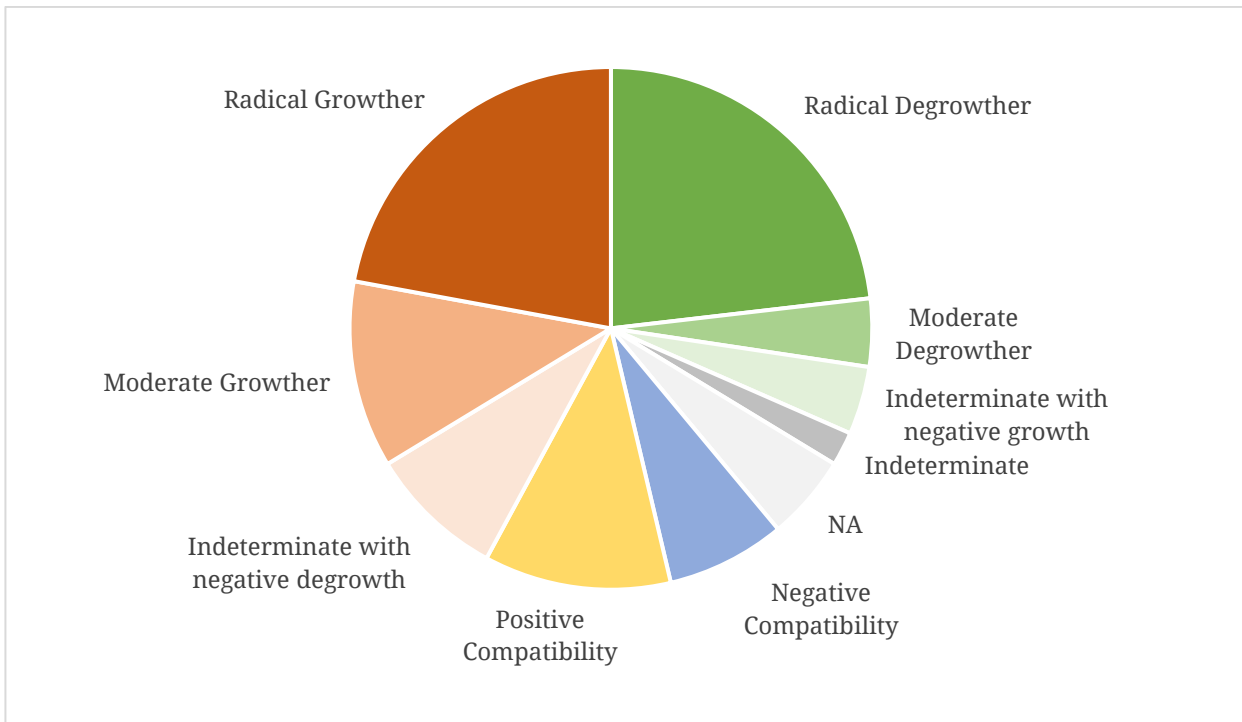
4.4. PBL education decision-making – qualitative analysis

Finally, we are interested in exploring whether these social representations are significant in terms of future teachers' decision-making and how they relate to decolonial perspectives. They were asked to imagine they had to design PBL Projects based on Social Problems, Environmental Problems and Socio-Environmental Problems and to suggest the topics they would use to do so.

Significant differences were detected when comparing the project proposals from *Growthers* and *Degrowthers*:

- **Topics:** Some topics were frequently repeated among both groups, but in an unbalanced way: social inequalities were considered by 73% of degrowthers and 31% of growthers; gender inequalities were considered by 38% of degrowthers and 21% of growthers. Racism was chosen by both groups with no significant variation (23%-21%), but some degrowthers linked it to exploitation, colonialism, and negative discourses about migrant people.

- **Concepts:** Nearly half of growthers (43%) would design a PBL project based on climate crisis; degrowthers chose this topic less (30%) and chose to talk about the climate emergency or climate crisis. Colonialism, class, extractivism, the Global South, forced migrations or exploitation were concepts that only arose in degrowthers' projects.

- **Specifics:** Reponses from students from both groups had different levels of specificity, but there was a higher index of specificity among future teachers who are degrowthers. Since climate change, waste, racism, pollution or social inequalities are frequent topics proposed by growthers, there is a higher number of degrowthers making more concrete project proposals such as the meat industry; fast-fashion; oil companies; nuclear plants; armed conflict, etc.

- **Complexity:** The most reliable difference between both groups is how their projects include complex power and interdependent relationships. Only 2 growthers talked about causal relationships when designing a PBL project, in comparison to 17 degrowthers (Table 7). Among future teachers who are degrowthers there was also a higher percentage of action-oriented projects that highlighted the agency and the participation of students as members of society.

Table 7. Examples of Complex and Causal Relationships in PBL Projects

Examples from Growthers (6%)	Examples from Degrowthers (65%)
Deforestació com a via per a l'avenç economic [FT 29; Deforestation as a method for economic advancement]	*Refugiats a causa de les catàstrofes ambientals* [FT25; Refugees due to environmental disasters]
Conseqüències del canvi climàtic en els moviments de població [FT88; Impact of climate change on population movement].	*Els monocultius per alimentar els animals i motivar la indústria càrnica que contamina moltíssim* [FT42; Monocultures to feed animals and motivate the meat industry that produce significant pollution]
	La deforestació d'un bosc situat en el barri per tal de construir-hi un edifici industrial [FT62; The deforestation of a forest located in the neighbourhood in order to build an industrial building]
	La invisibilització, a través dels discursos de poder, de l'emergència climàtica [FT76; Invisibilisation, through discourses of power, of the climate emergency]
	La violència que pateixen col·lectius autòctons per extraccions de productes, problemes sobre la gestió dels mateixos recursos i també les afectacions socials i ambientals que es desencadenen després [FT79; The violence suffered by indigenous groups through product extractions, problems with the management of the same resources and also the social and environmental impact that is triggered later]

5   DISCUSSION AND CONCLUSION

Both *Growth* and *Degrowth* notions were highly polarised among our students. In relation to the contrasted concepts, attitudes towards them were in opposition for half the students but compatible for a great number of them (19%). Although positive or negative attitudes towards *growth* and *degrowth* were surprisingly balanced (≥35%, ≤48%), *growth* was slightly more highly rated than *degrowth*, and *degrowth* was seen as more uncertain and unknown.

Degrowth is an unfamiliar concept for most students, especially those with no prior environmental or economic education. Attitudes and self-positioning are slightly vaguer than they are in relation to the *growth* notion, but not significantly. However, these differences are clear in terms of the conceptualisation of open answers, where *growth* is strongly described using technical economic and social notions, whether this is to explain, defend or denounce it. On the contrary, *degrowth* notions are vaguer, both from those who understand it to be a necessary, inevitable or desirable future scenario and those who understand it to be a social or economic debacle. It is interesting to us how *degrowth* notions relate to the concept of *economy*: for those who have no notions of economy alternatives, degrowth denies economy dynamics; on the contrary, it is already understood to be another economic system, frequently identified as a consequence or reaction to capitalism.

These results seem to reinforce previous approaches: in relation to the debates about the identification of *capitalism* and *growth*, our students identify both concepts as intrinsic and inseparable but with a different semantic load. On the other hand, *recession* is frequently identified with *degrowth*. Taibo (2010) points out this degrowth-recession confusion as a rooted belief, making it difficult to extend positive social attitudes to degrowth approaches.

According to Shanks (2019), the failure to move beyond neoclassical economics is a failure "to expose fundamental components of inequality and may inhibit action in social studies classes to address injustice" (p. 587). Modig (2022) also points out how the lack of understanding and discussion of economic systems diminishes democratic influence. Our results show that there is a significant relationship between critical visions of economics, a positive attitude towards degrowth, prior environmental or economic education, and projections of PBL projects based on complex and critical relationships with action-oriented decolonial perspectives. There is also a strong relationship between neoclassical perspectives, a positive attitude towards growth, a lack of environmental and economic education, and the projection of PBL projects based on simple and abstract topics, with a lack of causal, complex and critical relationships. These relationships are neither linear nor exclusive but are highly significant.

A lack of economic education is related to political attitudes of being afraid of bringing social criticism into schools (Warlenius, 2022), and there is evidence enough showing how "social studies teachers are generally unfamiliar with the discipline" (Shanks, 2019, p. 578).

When cross-matching block 1 and 2 data, a strong relationship arises between critical visions of the current economic system and the ability to develop PBL proposals which are more (1) concrete, more (2) complex, establishing cause-effect relationships between social and environmental factors, (3) critical, pointing out inequalities and also power and colonial relationships (4) action-oriented, and more (5) justice-oriented. This type of dynamic has also been observed in experiences in secondary schools: pluralising economic approaches are related to a more critical understanding of social, economic and political dynamics and the projections of alternative futures and solutions which are more just (Andreu i Rosés & Santisteban Fernández, 2022).

Recent studies have shown that the political and environmental dimensions of socioenvironmental problems are emphasised mainly by students with environmental education (Massip Sabater et al., 2021; Ortega-Sánchez et al., 2020). Even when Environmental Education (EE) has played a role in intensifying neoliberal narratives and ideologies based on growth and development (Lin et al., 2023), critical views on EE which introduce capitalist/degrowth tensions, allow us to introduce "ecological confrontations and distributive conflicts" and to "advance to other models of sustainability" (Espinet et al., 2023, p. 1018). Current data adds evidence to this since it demonstrates that students who have taken EE within their subjects are more likely to be critical of the current economic system, they are also more aware of non-neoclassical economic approaches and are more likely to have good attitudes towards them. More research is required to understand this relationship and to identify the roles of personal disposition and prior education.

Rodríguez-Marín et al. (2020) defend the need to explicitly implicate capitalism and its ideological imaginary based on growth and production as problematic when working on socioenvironmental problems. We agree with them. Even when notions of *capitalism* or the *climate crisis* have negative conceptual connotations according to participants' social representations, *growth* is still a very well-rated concept, even when it is intrinsically involved in them. Ho and Seow (2015) explain how the lack of understanding of socio-environmental phenomena and their cause-effect relationships limit educational possibilities to a large extent, something that is clear in light of these results.

Finally, we would like to empathise with the decolonial perspectives emerging from this research, which was one of our main aims. These results are contextual and explorative, but they can spread some light on the theoretical discussion about degrowth being considered a decolonial approach. Future teachers who are growthers tend to reproduce economic imaginaries based on capitalist and colonial structures, with a lack of critical understanding, and they design simplistic educational projects and find it difficult to undertake complex and critical analyses of current problems. For future teachers who are degrowthers, degrowth imaginaries have not only led to a *demand for decolonisation* (Hickel, 2021) but also an *opportunity to decolonise* decision-making in education. Degrowthers are, at least, more open to the *decolonising journey of teachers*[3].

REFERENCES

Abric, J.-C. (2001). Metodología de recolección de las representaciones sociales [Methodology for collecting social representations] In J.-C. Abric, *Practicas sociales y representaciones*. Coyoacán.

Adams, E. (2019). Economics and the civic mission of social studies education: Two critiques of neoclassicism. *Citizenship, Social and Economics Education*, *18*(1), 16–32. https://doi.org/10.1177/2047173419841915

Ajaps, S. (2023). Deconstructing the constraints of justice-based environmental sustainability in higher education. Teaching in Higher Education, 28(5), 1024-1038. https://doi.org/10.1080/13562517.2023.2198639

Andreu i Rosés, M., & Santisteban Fernández, A. (2022). La formació del pensament crític de l'alumnat de 4t d'ESO a partir de l'anàlisi dels seus relats sobre la crisi econòmica [The formation of the critical thinking of 4th grade ESO students based on the analysis of their stories about the economic crisis]. *Comunicació Educativa, 35*, 79–100. https://doi.org/10.17345/comeduc202279-100

Andreucci, D., & McDonough, T. (2015). Capitalism. In G. D'Alisa, F. Demaria, & G. Kallis (Eds.), *Degrowth: A vocabulary for a new era* (pp. 104–109). Routledge.

Bhambra, G. K. (2014). Postcolonial and decolonial dialogues. *Postcolonial Studies, 17*(2), 115–121. https://doi.org/10.1080/13688790.2014.966414

---

[3] Concept from Stein et al. (2021).

Bockstael, M., Costanza, R., Strand, I., Boynton, K., Bell, L., & Wainger, L. (1995). Ecological economic modeling and valuation of ecosystems. *Ecological Economics*, *14*(2), 143–159. https://doi.org/10.1016/0921-8009(95)00026-6

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Brett, P., & Guyver, R. (2021). Postcolonial history education: Issues, tensions and opportunities. *Historical Encounters*, *8*(2), 1–17. https://doi.org.10.52289/h8.210

Burgos, E. (1983). *Me llamo Rigoberta Manchú y así nació la conciencia*. Casa de las Américas.

Butler, J. (2004). *Precarious life: The powers of mourning and violence.* Verso.

Castoriadis, C. (1975). *The imaginary institution of society*. Polity Press.

Crenshaw, K. (1989). *Demarginalizing the intersection of race and sex: A black feminist critique of antidiscrimination doctrine, feminist theory and antiracist politics*. University of Chicago Legal Forum.

D'Alissa, G., Demaria, F. & Kallis, G. (Eds.). (2015). *Degrowth: A vocabulary for a new era*. Routledge.

Davis, A. Y. (1981). *Women, race and class*. Random House.

Demaria, Federico, Schneider, François, Sekulova, Filka, & Martinez-Alier, Joan (2013). What is degrowth? From an activist slogan to a social movement. *Environmental Values*, *22*(2), 191–215. https://doi.org/10.3197/096327113X13581561725194

Dorninger, Christian, Hornborg, Alf, Abson, David J., von Wehrden, Henrik, Schaffartzik, Anke, Giljum, Stefan, Engler, John-Oliver, Feller, Robert L., Hubacek, Klaus, & Wieland, Hanspeter (2021). Global patterns of ecologically unequal exchange: Implications for sustainability in the 21st century. *Ecological Economics*, *179*, Article 106824. https://doi.org/10.1016/j.ecolecon.2020.106824

Earle, J., Moran, C., & Ward-Perkins, Z. (2016). *The econocracy: The perils of leaving economics to the experts*. Manchester University Press.

Espinet, M., Llerena, G., Santos, L. F., Robles, L. R., & Massip Sabater, M. (2023). Co-operatives for learning in higher education: Experiences of undergraduate students from environmental sciences. *Teaching in Higher Education*, *28*(5), 1005–1023. https://doi.org/10.1080/13562517.2023.2210078

Fairbanks, E. (2022). *The inheritors: An intimate portrait of South Africa's racial reckoning.* Simon & Schuster.

Feiner, S., & Roberts, B. (1999). Hidden by the invisible hand: Neoclassical economic theory and the textbook treatment of race and gender. In A. Aerni & K. McGoldrick (Eds.), Valuing us all: Feminist pedagogy and economics (pp. 43–65). University of Michigan Press.

Federici, S. (2004). *Caliban and the witch*. Autonomedia.

Feola, G. (2019). Degrowth and the unmaking of capitalism: Beyond "decolonization of the imaginary". *ACME: An International Journal of Critical Geographies*, *18*(4), 977–997. https://doi.org/10.14288/acme.v18i4.1790

Fine, B. (2008). Vicissitudes of economics imperialism. *Review of Social Economy*, *66*(2), 235–240. https://doi.org/10.1080/00346760701821987

Foucault, M. (1982). The subject and power. *Critical Inquiry, 8*(4), 777–795. https://doi.org/10.1086/448181

Freeman, A. (2010). The economics of tomorrow: The case of assertive pluralism in economics education. *American Journal of Economics and Sociology, 69*(5), 1591–1613.

Garcés, M. (2020). *Escola d'aprenents* [School of learners]. Galàxia Gutenberg.

Grosfoguel, R. (2007). The epistemic decolonial turn. *Cultural Studies*, *21*(2–3), 211–223. https://doi.org/10.1080/09502380601162514

Gudynas, E. (2015). Buen vivir [Good living]. In G. D'Alisa, F. Demaria, & G. Kallis (Eds.), *Degrowth: A vocabulary for a new era* (pp. 285–289). Routledge.

Haraway, D. (1988). Situated knowledges: The science question in feminism and the privilege of partial perspective. *Feminist Studies*, *14*(3), 575–599. https://doi.org/10.2307/3178066

Herrero, Y. (2013). Miradas ecofeministas para transitar a un mundo justo y sostenible [Ecofeminist perspectives to move towards a fair and sustainable future]. *Revista de Economía Crítica, 2*(16), 278–307. https://www.revistaeconomiacritica.org/index.php/rec/article/view/334

Herrero, Y., Cembranos, F., & Pascual, M. (Coords.). (2019). *Cambiar las gafas para mirar el mundo: Una nueva cultura de la sostenibilidad* [Changing the glasses to look at the world: A new culture of sustainability]. Libros en Acción.

Hickel, J. (2021). The anti-colonial politics of degrowth. *Political Geography*, *88*, Article 102404. https://doi.org/10.1016/j.polgeo.2021.102404

Ho, Li-Ching, & Seow, Tricia (2015). Teaching controversial issues in geography: Climate change education in Singaporean schools. *Theory and research in social education*, *43*(3), 314–344. https://doi.org/10.1080/00933104.2015.1064842

hooks, b. (1994). *Teaching to transgress: Education as a practice of freedom*. Routledge

Huber, M. T. (2021). The case for socialist modernism. *Political Geography*, *87*, Article 102352. https://doi.org/10.1016/j.polgeo.2021.102352

Iovino, S. (2010). Ecocriticism and a non-anthtopocentric humanism. In L. Volkmann, N. Grimm, I. Detmers, & K. Thomson (Eds.), *Local natures, global responsibilities: Ecocritical perspectives on the new English literature* (pp. 29–53). ASNEL.

Jackson, T. (2015). New economy. In G. D'Alisa, F. Demaria, & G. Kallis (Eds.), *Degrowth: A vocabulary for a new era* (pp. 262–266). Routledge.

Kallis, G. (2019). *Limits: Why Malthus was wrong and why environmentalists should care*. Stanford University Press.

Kothari, A., Salleh, A., Escobar, A., Damaria, F., & Acosta, A. (Eds). (2019). *Pluriverse: A post-development dictionary*. Tulika Books.

LasCanta, L. (2018). De la teología al antiextractivismo: Ecofeminismos en Abya Yala. *Ecología Política*, *54*, 35–41. https://www.ecologiapolitica.info/de-la-teologia-al-antiextractivismo-ecofeminismos-en-abya-yala/

Latouche, S. (2012). Can the left escape economism? *Capitalism, Nature, Socialism*, *23*(1), 74–78. https://doi.org/10.1080/10455752.2011.648841

Latouche, S. (2015). Decolonization of imaginary. In G. D'Alisa, F. Demaria, & G. Kallis (Eds.), *Degrowth: A vocabulary for a new era* (pp. 156–160). Routledge.

Lin, J., Fiore, A., Sorensen, E., Gomes, V., Haavik, J., Malik, M., Joanna Mok, S. K., Scanlon, J., Wanjala, E., & Grigoryeva, A. (2023). Contemplative, holistic eco-justice pedagogies in higher education: From anthropocentrism to fostering deep love and respect for nature. *Teaching in Higher Education*, *28*(5), 953–68. https://doi.org/10.1080/13562517.2023.2197109

Löfström, J., & Weber, B. (2022). Economic education: Its past, present, and future. *Journal of Social Science Education*, *21*(2). https://doi.org/10.11576/jsse-5678

Lupinacci, J., Happel-Parkins, A., & Lupinacci, M. W. (2018). Ecocritical contestations with neoliberalism: Teaching to (un)learn "normalcy". *Policy Futures in Education*, *16*(6), 652–668. https://doi.org/10.1177/1478210318760465

Massip Sabater, M. (2022). *La humanització de la història escolar* [Humanizing history Education; Doctoral dissertation, Universitat Autònoma de Barcelona]. TDX - Theses and Dissertations Online. http://hdl.handle.net/10803/675233

Massip Sabater, M., Espinet, M., Almendro, R., Llerena, G., & Hosta, J. (2021). Problemas socio ¿qué? Los problemas socioambientales y su concreción por el profesorado en formación [Socio-what problems? Socio-environmental problems and their realisation by trainee teachers]. *REIDICS. Revista de Investigación en Didáctica de las Ciencias Sociales*, *9*, 115–136. https://doi.org/10.17398/2531-0968.09.115

Mies, M., & Bennholdt-Thomsen, V. (1999). *The subsistence perspective: Beyond the globalised economy*. ZED Books; Spinifex Press.

Mignolo, W. D. (2007a). Delinking: The rhetoric of modernity, the logic of coloniality and the grammar of de-coloniality. *Cultural Studies*, *21*(2–3), 449–514. https://doi.org/10.1080/09502380601162647

Mignolo, W. D. (2007b). Introduction: Coloniality of power and de-colonial thinking. *Cultural Studies*, *21*(2–3), 155–167. https://doi.org/10.1080/09502380601162498

Mignolo, W. D. (2011). *The darker side of Western modernity: Global futures, decolonial options*. Duke University Press.

Modig, N. (2022). Why powerful economic content and scientific language in social studies textbooks matters. *Journal of Social Science Education*, *21*(2). https://doi.org/10.11576/jsse-3969

Mora, M. (2022). La teoría de las representaciones sociales de Serge Moscovici [Serge Moscovici's theory on social representations]. *Athenea digital*, 2.

Nelson, J. (2011). Broader questions and a bigger toolbox: A problem-centered and student-centered approach to teaching pluralist economics. *Real-World Economics Review*, *58*, 9–18. https://rwer.wordpress.com/2011/12/12/rwer-issue-58-julie-nelson/

Ortega-Sánchez, D., Alonso-Centeno, A., & Corbí, M. (2020). Socio-enviromental problematic, end-purposes, and strategies relating to education for sustainable development (ESD) through the perspectives of Spanish secondary education trainee teachers. *Sustainability*, *12*(14), 5551. https://doi.org/10.3390/su12145551

Pashby, K., & Costa, M. (2021). Interfaces of critical global citizenship education in research about secondary schools in "global North" contexts. *Globalisation Societies and Education*, *19*(3), 1–14. http://dx.doi.org/10.1080/14767724.2021.1904213

Picchio, A. (2015). Economia feminista [Feminist economy]. In G. D'Alisa, F. Demaria, & G. Kallis (Eds.), *Degrowth: A vocabulary for a new era* (pp. 294–298). Routledge.

Quijano, A. (2000). Coloniality of power and Eurocentrism in Latin America. *International Sociology*, *15*(2), 215–232. https://doi.org/10.1177/0268580900015002005

Quijano, A. (2007). Coloniality and modernity/rationality. *Cultural Studies*, *21*(2–3), 168–178. https://doi.org/10.1080/09502380601164353

Riis-Hanse, A. (1993). 500 years of sacrifice before the alien gods: An interview with Rigoberta Menchu Tum. *Jewish Quarterly*, *40*(4), 17–20. https://doi.org/10.1080/0449010X.1993.10705958

Rodríguez-Marín, F., Puig Gutiérrez, M., López-Lozano, L., & Guerrero Fernández, A. (2020). Early childhood preservice teachers' view of socio-environmental problems and its relationship with the sustainable development goals. *Sustainability*, *12*, 7163. https://doi.org/10.3390/su12177163

Santos, B. S. (2019). *El fin del imperio cognitivo: La afirmación de las epistemologías del sur* [The end of the cognitive empire: The affirmation of epistemologies of the South]. Trotta.

Shanks, N. (2019). Against 'economic man': A feminist challenge to prevailing neoclassical norms in K-12 economics education. *Theory & Research in Social Education*, *47*(4), 577–603. https://doi.org/10.1080/00933104.2019.1647904

Spivak, G. C. (1988). Can the subaltern speak? In C. Nelson & L. Grossberg (Eds.), *Marxism and the interpretation of culture* (pp. 271–313). Macmillan Education.

Stein, S., Ahenakew, C., Jimmy, E., Andreotti, V., Valley, W., Amsler, S., Calhoun, B. & Gesturing Towards Decolonial Futures Collective. (2021). *Developing stamina for decolonizing higher education: A workbook for non-indigenous people*. University of British Columbia.

Taibo, C. (2010). *En defensa del decrecimineto: Sobre capitalismo, crisis y barbarie* [In defense of degrowth: on capitalism, crisis and barbarism]. Catarata.

Tinkham, J. R. (2013). *That's not my history! Examinig the role of personal counter-narratives in decolonizing Canadian history for Mi'khaw students* [Doctoral dissertation, University of Alberta]. ERA: Education and Research Archive. https://doi.org/10.7939/R3ND7J

Vilà, R., & Bisquerra, R. (2019). El análisis cuantitativo de los datos [The quantitative analysis of the data]. In R. Bisquerra (Coord.), *Metodología de la investigación educativa* (pp. 251-266). La Muralla.

Warlenius, R. H. (2022). Learning for life: ESD, ecopedagogy and the new spirit of capitalism. *The Journal of Environmental Education*, *53*(3), 141–153. https://doi.org/10.1080/00958964.2022.2070102

AUTHOR BIOGRAPHIES

Mariona Massip Sabater is part of the educational community as professor in teacher education programs at the Universitat Autònoma de Barcelona (UAB), researcher, mother and educational volunteer. After her History degree at the Universitat de Barcelona, she specialised in Social Sciences Education at UAB, as a member of GREDICS research group. She has worked on humanizing paradigms of social sciencies education, agency and absence in socio historiacal narratives, critical thinking and hate speeches, education for the future, economic and finantial education, and socio-environmental problems, among others. She is deepening decolonial and feminist approaches on social sciences education. She is a member of the interdisciplinary and international Seminar on Education & Degrowth.

Mariona Espinet is a retired professor of Science Education from the UAB, Catalonia, Spain. After teaching middle and secondary general science, chemistry and physics she earned a master's degree in Inorganic Chemistry at the UAB and a PhD in Science Education at the University of Georgia, Athens. She taught science and environmental education in pre-service and in-service pre-school and primary teacher education programs, as well as research courses offered at the master and doctoral levels. She is the coordinator of the research group Gresc@ (Education for Sustainability, School and Community) and the permanent Seminar on Education & Degrowth. She has been a member of the ESERA Board, co-founder of the ESERA SIG on Languages and Literacies in Science Education, and coordinator of ESERA SIG Histories of Science Education. Her research and innovation interests are strongly interdisciplinary and focus on science education for sustainability, classroom discourse and critical literacy in multilingual science learning environments, and community learning in school agroecology.