

‘DE-LEARNING, TO LEARN AGAIN’: TOWARDS A CRITICAL ENVIRONMENTAL PEDAGOGY IN MALTA

Saige Lawson
University of Malta

Abstract

This research is a qualitative inquiry into the history and current characteristics of environmental education in Malta. As a former British colony, Malta’s curriculum, including environmental education, was heavily influenced by the British standardized curriculum until the 1990s. Existing literature suggests that this may have functioned to de-center generational place-based knowledge and highlight the environmental knowledge and ideologies of a colonizing group. However, there is a gap in the literature that recognizes environmental education as a contested field in Malta and other post-colonial regions. In this research, I use semi-structured interviews to explore educators’ experience with environmental teaching in the formal education system in Malta. As indicated in the results, participants identified several challenges to environmental education in Malta, including limitations of the formal education system, structural factors influencing teacher agency and environmental attitudes, and perceived nature disconnectedness. I interpret these results through a lens of critical pedagogy and post-colonial theory, suggesting that influences of colonialism might still be reflected in present-day environmental education, through a lasting impact of colonial curricula and a sense of disconnection with natural spaces. I suggest that there is reason to reconsider environmental education as a ‘neutral’ field in Malta, and that a critically-informed environmental pedagogy has the

potential to become a site of critique, resistance, and action. I conclude with ideas for what this pedagogy might look like, built on insights from critical pedagogy, post-colonial theory, and the experiences of educators who participated in this research.

Keywords: Postcolonial, environmental education, educational reform, pedagogy, social justice

Introduction

In many contexts, education sets the direction for how knowledge, histories, and memories are inherited and learned. In post-colonial theory, it is widely accepted that education often perpetuates the knowledge systems and dominant ideologies of colonizing powers. Further, colonialism can suppress generational, place-based knowledge and disrupt the connection between people and their environment.

However, the connection between colonial education and environmental understanding or ideology remains underexplored. Specifically, it is not yet well established how colonialism—and the imposition of external environmental curricula—may have influenced the development of environmental education and shaped dominant environmental worldviews.

Malta has a long history of colonization, ending with political independence from the British empire in 1964. During the British period, Malta adopted much of the legislation, administration and education systems from the United Kingdom. In the early post-colonial era, environmental education was taught using British textbooks, with material irrelevant to the Maltese islands. In my research, I look at how this history of foreign environmental curricula may have influenced current environmental education and ideology in Malta. Founded in a framework of post-colonial theory and critical pedagogy, I begin my research with a ‘discourse of critique’ to build a theoretical understanding of environmental education in Malta, and view the socio-historical relations

of power that might shape this. Then, I go forward with a 'discourse of possibility,' to explore how this critical environmental pedagogy can become a site of critique, resistance, and action.

The research questions are as follows:

1. How do educators experience environmental education in Malta?
2. In what ways, if any, are the influences of colonialism reflected in current environmental education in Malta?
3. How could a critically-informed approach to environmental education have the potential to bring learners to feel connected to natural space, and empowered to take action in environmental protection and regeneration in Malta?

Theoretical framework: critical pedagogy & post-colonial theory

I draw on critical pedagogy as a framework for understanding the role of education in social change. Critical pedagogy recognizes that education is not neutral, but is embedded in and reflects power relations in society. It brings learners to critically view the world, to challenge existing assumptions and power structures, and ultimately to take action in transforming these structures (Giroux, 1997). Critical pedagogy is relevant in the discussion of environmental education in Malta because of its two-tiered approach to social change. The first component of critical pedagogy is using critique as a lens to ask how power has shaped institutions on all levels of society, and to name and understand this through a critical discourse. The second component is to imagine alternate realities through a discourse of possibility (Giroux, 1997). A critical environmental pedagogy, therefore, requires developing a historical consciousness regarding the relationship between power and place, and an understanding of the role of education in this process.

Many scholars in post-colonial theory view curricula created under colonial rule as tools in cultural assimilation. These curricula may devalue local and ancestral knowledge systems, bringing people to adopt the culture and epistemologies of colonizing groups (Mafela, 2014). Often, this results in some degree of cultural erasure, loss of ancestral place-based knowledge, or the absence of native language in schools (Morris, 2016). Given the complex and heterogeneous nature of colonial education systems, Mafela (2014) advocates for an analytical approach that is context and discipline-specific. Within post-colonial theory, it is widely accepted that history teaching is a contested field, especially in regions with colonial histories. Environmental education, however, has not been widely recognized as such. In the following section, I show how these are connected—how colonial policies impact education, and how colonial environmental education shapes how people come to learn about and relate to natural space.

While acknowledging the power of education in society, it is important to remember that the relationship between colonialism and schooling is non-deterministic. Homi Bhabha reminds us to think beyond a binary ‘colonizer’ and ‘colonized,’ and see the complexities within these identities (Bhabha, 1994 as cited in Hill, 2005, p. 143). Seeing education as a contested terrain is important not only for an analysis that acknowledges these complex realities, but also to recognize counter-hegemonic agency and imagine new ways of learning.

Literature review

The environmental impacts of colonialism

For the first time, the 2022 report from the United Nations Intergovernmental Panel on Climate Change recognized colonialism as a factor in climate change. Regions more vulnerable to climate-related disasters often have complex histories that make strategies for vulnerability reduction more difficult. This includes long-term economic dependencies on another nation, or colonially established governance structures (IPCC, 2022, p. 1197).

Colonialism and imperial expansion are predicated on natural resource exploitation, and the often violent dispossession of people from place. Extractivism, deforestation and environmental degradation are all common realities of colonialism across diverse geographies (Dias, 2020).

In many regions, colonial powers sought to erase ancestral place-based knowledge about land stewardship and sustainability practices. Post-colonial literature in North America, Australia, and New Zealand describes ‘attachment disruption’ – that colonial domination forcibly disconnected people from land, land-based culture, and traditional ways of living (Dupuis-Rossi, 2021). Significant environmental knowledge and connection were lost by systemically detaching people from the land and the political agency of this land (Light, 2020).

Recognizing the systemic roots of climate change vulnerability and environmental issues is an essential component of environmental education. It must critically engage with structures of power, such as colonial histories, and their lasting impact on environmental outcomes and ideologies. This forms a necessary foundation for a critical, action-oriented environmental pedagogy.

British educational influence in curriculum development

Situated between Sicily and the North African coast, the three Maltese islands (Malta, Gozo and Comino) have a combined landmass of 316 square kilometers. Due in part to its strategic position in the Mediterranean with natural sea ports, Malta has a long history of colonization. Over 2,000 years, Malta has been colonized by the Phoenicians, Greeks, Romans and Arab groups; the Angevin and Aragonese empires; the Knights of St. John; and became a British protectorate in 1800. Following the British colonial era, Malta adopted the British administration system, legislation and education. It gained independence in 1964, became a republic in 1974, saw the withdrawal of foreign military presence in 1979, and joined the EU in 2004.

As a former British colony, Malta's state school system is heavily influenced by the British education model (Chircop, 2017; Mifsud, 2012; Pace, 2009). Until 1992, Malta used the British-based General Certificate of Education, in which content 'in relation to the local Maltese environment was practically non-existent' (Pace, 1997, p. 74). In addition to this, an 'overwhelming reliance on the United Kingdom for educational models, textbooks and expertise' continued into the late 1990s (Sultana, 1999, p. 5).

After Malta's first National Minimum Curriculum was introduced in 1990, content and examinations became more relevant to the Maltese environment, marking a shift toward decentralization (Borg et al., 1995). However, an analysis of curricula at that time found that environmental content was repetitive, fragmented, and did not cover environmental issues most relevant to the Maltese islands (Pace, 1997, p. 75). Mifsud (2012) highlights the issue of transferability: educational practices that are effective in one context may not work in another. Malta's use of British curricula, developed for a vastly different geography and history, meant that students may not have learned about local ecosystems and context-specific environmental practices in school.

Pace (2009) writes that the long history of colonialism in Malta, along with influences from the Catholic church 'fostered a steady alienation from concerns about the environment and a narrow anthropocentric view of the value of land' (p. 1). Under British colonial rule, the concept of 'environment' appears to have shifted – from a broader understanding of the landscape to a focus on the individual home. Responsibility for the surrounding environment was largely seen as the domain of those in power at that time (Pace, 2009, p. 1). It is possible that this historical framing of environmental awareness may still influence prevailing attitudes toward land and sustainability today.

Early environmental education and pedagogical tensions

Environmental education in Malta formally began in the 1960s with the development of two NGOs: the Society for the Study and Conservation of Nature, and the Maltese Ornithological Society. Today, NGOs still play an important role in environmental education in Malta. The NGO Nature Trust Malta partners with the Maltese government to deliver EkoSkola, the Maltese chapter of an international program that seeks to promote sustainable development and environmental awareness in the classroom and broader community. Active since 2002, EkoSkola encourages student involvement in the planning and implementation of environmental initiatives in schools (Mifsud, 2012, p. 56).

In 1999, Environmental Studies was introduced in the curriculum as an examinable subject. Research by Mifsud (2012) and Pace (2009) suggests this created problems for environmental teaching, as the focus on exam performance led to curricula and teaching methods that prioritize memorization over holistic learning and skill development. This may also reflect a dominant education ideology that values test preparation over experiential approaches such as outdoor or inquiry-based learning. Examination-oriented pedagogy has also been identified as a major barrier to humanistic, learner-centered environmental education (Pace, 2000).

The National Curriculum Framework was introduced in 2011, and proposed the current Learning Outcomes Framework concept, which emphasizes skills-based, cross-curricular learning. Core subjects like mathematics, Maltese, and social studies are explicitly taught, while five cross-curricular themes – including Education for Sustainable Development (ESD) – are meant to be integrated across all subjects. Although specific learning outcomes are outlined, the content and emphasis of cross-curricular subjects is up to the discretion of the individual teacher. Currently, environmental education in Malta is included through the ESD Learning

Outcome Framework. While this is designed to add flexibility and innovation to ESD, it may also risk marginalizing the subject, particularly in a system still shaped by exam-oriented priorities.

Research shows that an examination-oriented pedagogy in Maltese schools limits the impact of environmental education, emphasizing rote learning over critical, reflective, and experiential approaches (Pace, 2009). While history teaching is often recognized as a contested field, particularly in regions with colonial histories, environmental education is rarely designed with the same critical lens. Despite this, existing literature indicates that it could be, given the colonial influences on its development and lasting legacies in cultural value systems and environmental ideologies. Further, prior to the inclusion of ESD in the National Curriculum Framework in 2011, teachers could teach about the environment and sustainability, but were not required to. This meant that the presence of environmental education in classrooms often depended on individual teachers' interest, confidence, and concern about the subject.

In conclusion, existing research suggests that the Maltese education system is heavily shaped by its colonial legacy, particularly through its adoption of British educational content. However, there has been no discipline-specific analysis of how colonialism has shaped environmental education in Malta, nor the transformative potential of alternative critical pedagogies in fostering environmental connection, engagement and action. Considering the connection between colonialism and climate change vulnerability, and education's role in either reproducing or challenging dominant ideologies, this suggests a significant gap in literature to explore.

Methodology

This study is grounded in critical theory, which shapes how I approach the research questions and make meaning from the findings. While analyzing topics of education, environment and colonialism, I use this critical lens to

ask where power might be reflected in these structures; critical theory supports an analysis of historical relations of power, and the social institutions and structures that work to either challenge or uphold its current distribution (Merriam & Tisdell, 2016). Ultimately, critical theory is concerned with ‘the demystification of power and the development of alternative frameworks’ (Gill 2012, p. 24).

This research is a qualitative inquiry, using semi-structured interviews as the primary method of data collection. I ask open-ended questions about educators’ experiences both learning and teaching about the environment, and any challenges, opportunities, and successes they’ve encountered.

Participants were identified through purposive sampling, informed by background research. As highlighted in the literature review, factors such as teachers’ agency, environmental ideology, and level of environmental training can influence the environmental education students receive (Mifsud, 2012; Pace, 2000). For this reason, I chose to recruit both teachers within the Maltese formal education system and educators working in Maltese environmental NGOs, including EkoSkola teachers.

I also recognize the importance of understanding the historical development of environmental education in Malta, as well as the broader education system. Therefore, I decided to recruit one or more subject-matter experts in education, history, and/or environmental education. My goal in selecting this non-homogeneous sample was to build a holistic understanding of environmental education in Malta today.

To recruit participants, I reached out to the directors of three environmental NGOs in Malta and nine state schools. I asked if they would be interested in participating in the research, and sent a recruitment letter for distribution in their organizations if so. One NGO responded, and two schools (one declined, the other agreed to share the letter with teachers). For EkoSkola educators, I

obtained permission from the program coordinator and contacted teachers individually via email. Three responded, and I conducted interviews with two. Due to a limited initial response, I used snowball sampling to identify additional participants, contacting people suggested by early interviewees. I also drew on my personal network and suggestions from my research supervisor, contacting individuals who met the sampling criteria.

The following seven participants took part in interviews for this research. Due to Malta's small size and interconnected communities, I include only general information about participants to protect anonymity.

Description of Participant	Pseudonym in Results Section
Environmental educator in a Maltese environmental NGO, with previous experience teaching at a state school	NGO Educator
State school teacher, also involved in non-formal environmental education projects in Malta	Teacher 1
Teacher at independent school in Malta	Teacher 2
Previous learning support assistant in a Maltese church school	Learning Support
Subject matter expert: an individual with experience developing environmental education / ESD curricula in Malta	Subject Matter Expert
EkoSkola Educator	EkoSkola 1
EkoSkola Educator	EkoSkola 2

Figure 1: Participant Descriptions

Data analysis

I conducted a thematic analysis to make sense of the data through multiple stages of coding. During preliminary coding, I highlighted emerging themes, focussing on describing what was being said rather than interpreting it. (Creswell, 2011, p. 247). While continuing interviews, my questions, notes and comments sparked new curiosities that informed subsequent conversations. In the next stage, I developed a code list and re-analyzed all completed transcripts to apply it consistently. I then started to look for patterns and connections between the existing codes, grouping similar codes together under larger themes. Eventually, I organized data into five overarching themes, outlined below:

Results

Theme 1: Limiting factors in the formal education system

Participants felt that the education system is, at present, not designed to deliver environmental education in a meaningful, impactful way. This is due in part to a content-heavy curriculum and examination-oriented pedagogy. All seven participants spoke about the curriculum being full of material teachers must cover. Educators described feeling intense pressure to teach everything in the syllabus, but there is too much material to cover and insufficient time. Many participants noted that the pedagogy in the formal education system places heavy emphasis on memorizing information for an exam. One teacher described their state school environment as '*rigid*,' saying that the school administration offers little support for teachers in deciding and enacting how they want to teach. The subject matter expert emphasized that environmental education must go beyond incorporating environmental topics into the curriculum; rather, it requires infrastructure that supports a fundamentally different pedagogy.

Environmental education is not just learning information about the environment, but it needs a radical change in the methodology and the pedagogy used. Because it has to change mindsets, not just information (Subject Matter Expert)

Theme 2: Nature (dis)connection, development and urbanization

While several participants described a strong personal connection to nature, they felt this was not widely shared across the broader public. Three participants said they remember a greater connection to the environment and natural spaces in previous generations, compared with the present. Several participants linked this shift to broader societal changes, such as the move from rural to urban living. Many felt that increasing urban, commercial and residential development contributes to this disconnect – given Malta's small land mass, many houses, schools and workplaces do not have access to surrounding natural areas. Many participants expressed feelings of grief and anger at the growing pace of development.

I think we passed through a phase where we focussed a lot on economic growth. Maybe we thought that our island is sort of infinite, and that we could build everywhere and that we could do everything.... So we lost public beaches, we lost space, we lost fields, we lost agricultural land, certain apartments do not get sunlight because they're so high rise. (EkoSkola 1)

Theme 3: Social and historical factors influencing present-day environmental ideologies

The subject matter expert reflected on how Malta's colonial history may continue to influence present-day environmental attitudes. They suggested that, during times of British colonialism, public space was viewed as

belonging to the British monarchy, and this has contributed to a sense of detachment or lack of ownership over local land and the environment.

A related issue is how the environment was taught in schools. When I asked participants how they learned about the environment, three people talked about learning from British environmental textbooks. One teacher noted that all the examples were British and remembered learning about rivers and glaciers in the UK. Two other participants felt that this focus on a foreign context left them with limited knowledge of the Maltese environment, such as the role of native species in local ecosystems.

So it's not just the notion that you don't own your environment. But even the things that you know about the environment are not correct. (Subject Matter Expert)

One EkoSkola educator described a moment when, after learning about British geography, plants and animals in school, they realized in adulthood that what they had been taught in school was irrelevant to the Mediterranean context.

Because you learned, but you had to de-learn, to learn again. You know? Because you find that this was not useful for me [...] what they taught me, it was not good for Malta. (EkoSkola 1)

Theme 4: The role and importance of teachers

All participants emphasized the pivotal role that teachers play in determining the kind of environmental education that students experience. One educator said that the impact of the EkoSkola program and level of student engagement is very dependent on the attitudes of the linked teacher at the participating school. They also noted that teachers who feel a strong personal connection to the environment are more likely to dedicate time to the ESD cross-curricular subject than those who feel less connected to nature.

Several participants also expressed that teachers often feel unprepared to integrate the ESD Learning Outcome Framework into their classes, due to a lack of training and support. Related to this, they talked about curriculum changes occurring rapidly and without teacher input, leading to additional stress and a sense of disempowerment.

Theme 5: Meaningful environmental education

Participants felt that environmental education should go beyond the cognitive and scientific content to include emotions, values and personal experiences. They emphasized that environmental education should cultivate a sense of empowerment and agency in students. A recurring sub-theme was the value of outdoor education as a means of enhancing student engagement and connection with nature. Participants talked about examples of experiential outdoor learning, such as foraging, wildlife observation, and ecological science experiments.

Discussion

The formal education system: experiences of a transmissive pedagogy?

While talking about their experiences in the education system, both as students and teachers, participants described learning environments characterized by memorization and exam preparation. Participants collectively agreed that these characteristics of the formal education system pose challenges for environmental education. One possible interpretation of this theme is that current environmental education may align with a transmissive pedagogical model.

A transmissive pedagogy reflects what Giroux (1997) calls the positivist mode of rationality. This way of teaching is not concerned with developing historical consciousness, and separates the ‘fact’ from its social and historical context.

As a result, complex problems are treated in isolation, leaving social, political and economic structures unexamined. As Giroux (1997) argues, 'divorced from history, these structures appear to have acquired their present character naturally, rather than having been constructed by historically specific interests' (p. 13). Consequently, social problems tend to be approached with technocratic, rather than political solutions.

Regarding environmental education, this might reflect an underlying ideology that assumes increased environmental knowledge and awareness will automatically lead to pro-environmental action. This assumption has been challenged in previous research (Pace, 2000). A significant risk of this pedagogical approach is depoliticizing topics in (environmental) education.

The role and experiences of teachers

As shown in the results section, many participants felt teachers have limited agency within the state school system. This concern connects with Theme 1, *Limiting Factors in the Formal Education System*, as participants described how the pressure to cover required material and prepare students for exams often restricts their ability to make autonomous teaching decisions.

Feeling constrained by the curriculum and the formal education system also limits the environmental education teachers can offer. Several participants expressed a desire to engage in outdoor education and experiential learning, such as unstructured play and nature exploration. However, the pressure to cover all required material in the syllabus restricts their ability to use creative and innovative approaches to environmental education.

Existing research shows that teacher agency is linked and influenced by structural factors within the education system. Education systems characterized by rigorous standardized testing are shown to reduce teacher agency, as does societal pressure which makes teachers responsible for student achievement. Further, the level of teacher self-directedness depends

on the extent to which teachers feel they have to adhere to the prescribed curriculum. Teacher agency, therefore, is largely dependent on the cultural, historical, and institutional context of the education system (Erss, 2018, p. 252).

Participants emphasized that teachers' environmental attitudes and ideologies influence their commitment to ESD learning outcomes. This suggests that students' experiences of environmental education are shaped by factors at both an individual and institutional level.

At the individual level, a teacher's environmental knowledge, preparation, and values all impact their approach. At an institutional level, environmental education is affected by the teacher-administration relationship, the extent of teacher involvement in curriculum development, and systemic limitations within the formal education system.

Colonialism, environmental ideology and nature (dis)connection

Related to Theme 2: *Nature (Dis)connection*, many participants expressed grief and frustration at the extent of development on the Maltese islands. They linked nature disconnection to increased urban development and the shift from an agriculture-based lifestyle to urban living. Drawing on broader understandings of colonization, development and relationships to place, this disconnection may also reflect a lasting impact of colonialism in Malta.

In regions of settler-colonialism, existing research shows how colonization functioned to dispossess people from the land and natural environment, food and sustainability systems, and traditional ways of living (Dennis & Robin, 2020; Hansen, 2018; Wildcat, et al., 2014). Research in the United States shows how some social studies curricula convey a 'settler colonial land ethic,' which Calderon (2014) argues must be critically examined and made explicit (p. 24). While historical contexts differ, existing research highlights the power of curricula and teaching to shape specific understandings of place.

In the Maltese context, research by Pace (2009, p. 1) suggests that the long history of colonialism in Malta has fostered an alienation from land, and narrowed a concept of environmental responsibility and ownership to the area immediately surrounding individual homes. In the 1970s and 80s, there was a period of increased development in Malta. According to Cauchi (2014, p. 26) this process was underpinned by ‘efforts to shift the national economy towards a sustained program of industrialization;’ this sought to generate economic growth and therefore reduce political and economic dependency on Britain during the early post-colonial period. This suggests that the movement away from an agricultural-based lifestyle and increased development of the Maltese islands may have been associated with colonialism.

Foreign textbooks and materials

As described in the results, many participants recalled learning about the British environment in school: plants, animals, and ecosystems irrelevant to Maltese ecology. The importance of place-based, context-specific education likely influenced how students learned about, understood, and valued the environment. Critical pedagogy has long examined the relationship between schooling, ideology and texts. Giroux (1997, p. 74) described ideology as a set of representations concretized in behaviour, discourse, lived experiences, and texts. Critical theorists such as Marx and Gramsci argue that any analysis of ideology must also include an analysis of power. In this context, this could mean asking how British environmental textbooks might have functioned to construct and/or reproduce an ‘official knowledge’ about the environment. Here, official knowledge refers to ‘the mechanism whereby knowledge rooted in certain cultures and traditions is considered superior to others and established as legitimate knowledge’ (Mayo, 2022, p. 2277). According to Freire, official knowledge comes about after cultural invasion, in which one group invades the cultural context of another and imposes its view of the world. Freire also argued that cultural invasion is closely tied to transmissive pedagogy, where the knowledge of dominant groups is positioned as superior or ‘official’ and transmitted through schooling. In the Maltese context, past

environmental education may have conveyed an ‘official knowledge’ rooted in a foreign environment, rather than fostering a connection to the local ecology. This can also be understood as a form of epistemic violence (Spivak, 2010), which marginalizes local and generational place-based knowledge.

Although British environmental textbooks are no longer used in schools, their influence may persist. As discussed, participants emphasized that teachers’ environmental attitudes and values significantly impact the environmental education that students receive. If many educators were taught about the environment using foreign materials, this may have shaped their environmental ideologies. Giroux (1997) views teachers as both products and producers of history, who are guided by the paradigms and socialization that they learned. This raises the question of whether there may be an unconscious continuation of environmental ideologies rooted in foreign curricula.

Of course, this is only one interpretation based on themes that emerged from interviews. Advancing a non-reductionist analysis, it’s important to recognize that small island states do not often have the resources to develop education materials locally (Baldacchino, 2019). The use of British environmental textbooks likely reflects economy-of-scale realities, rather than attempts to create or secure a knowledge hegemony. Additionally, this analysis does not account for other ways of learning about the environment, through family, community values, or personal experiences in nature. While acknowledging these complexities, however, I think it’s important to critically examine the use of foreign education materials, and ask: Who were these books written for, and for what purpose? What ideologies, cultures, and perspectives do they reflect? Whose history and language are being taught? Although this study does not answer these questions, its findings support a rationale for looking at history and present-day education in this way.

‘De-learning, to learn again’

As outlined in the results, one EkoSkola educator described a process of having to ‘de-learn’ aspects of the environmental education they had learned in school to re-learn content relevant to the Maltese environment – an experience I interpret as transformative learning. According to Mezirow (1997, p. 7) transformative learning is sparked by a process of critical reflection on the assumptions that form the basis of our beliefs and understandings of the world. After this moment of realization, the EkoSkola educator talked about starting to critically question other environmental and sustainability-related topics, such as where food comes from when it could be grown in Malta. To me, this affirms the power of critical, transformative education in bringing about social change.

Towards a critical environmental pedagogy: recommendations and further research

Until this point, I have used a ‘discourse of critique’ to build an understanding of the ‘interplay between historical consciousness, critical thinking and emancipatory behaviour’ (Giroux, 1997, p. 26). Now, I will go forward with a ‘discourse of possibility’ to explore what this critical environmental pedagogy might look like in practice.

Recognizing teachers as transformative intellectuals

Critical pedagogy advances a view of teachers as transformative intellectuals, deserving of deep respect and support in their (environmental) education practice. Giroux (1997) describes transformative educators as ‘bearers of dangerous memory,’ who engage with how knowledge and ideology have been shaped and contested throughout history (p. 105). As such, educators can use both a language of critique and language of possibility, elevating forms of knowledge that have been historically marginalized.

Recognizing teachers as transformative intellectuals also requires creating conditions that foster teacher agency. In environmental education, this could involve giving greater curricular autonomy to support innovative and experiential learning – the value of which has been emphasized in previous sections. At the individual level, supporting a critical environmental pedagogy could mean providing space and opportunities for teachers to reflect on their own environmental relationships, knowledge, and ideologies.

A place-based pedagogy: centering local knowledge

Meaningful, place-based environmental education offers a powerful potential for re-centering local and generational local systems in Malta, while becoming a site for decolonial and counter-hegemonic resistance. As argued by Tuck et al. (2014), the concept of ‘land’ carries deep relationships, histories and ways of learning, teaching and knowing (p. 8). In the Maltese context, where colonial legacies may continue to shape environmental education and ideologies, a critical environmental pedagogy would invite learners to meaningfully connect with the environment through place-based pedagogy, and move forward with a decolonial epistemic perspective (Mignolo, 2011).

Gruenwald’s (2003) concept of a *critical pedagogy of place* blends traditions of critical pedagogy and place-based education, with the aim of examining how political and economic decisions impact the places we inhabit (p. 3). This involves ‘reinhabitation:’ the process of unlearning dominant narratives and re-engaging with more socially just and sustainable ways of living. Participants spoke a lot about environmental education including an outdoor learning element, which could be another powerful means of reinhabitation. An example of this could be learning local sustainable farming practices, or exploring food sovereignty through growing and harvesting local foods. Existing literature highlights place-based outdoor learning as a way of fostering meaningful connections with land, and centering local and generational land knowledge. This is particularly emphasized in regions with colonial histories (Tuck et al., 2014).

Another powerful form of reinhabitation is language. Maltese place names carry information about water, vegetation, directions and landscape, often lost in English translations (Ciantar, 2010). Further, environmental concepts expressed in Maltese may offer culturally specific understandings that have been sidelined through English-language textbooks and instruction. A critical environmental pedagogy with the use of Maltese language can be a powerful tool to affirm learners' connection to place.

Although some traditional environmental practices may not be relevant or feasible today, integrating ancestral knowledge can enrich present-day environmental teaching. The framework of *Two-Eyed Seeing* (McKeon, 2012) integrates multiple knowledge systems, by learning to see the strengths of native ancestral knowledge with one eye, and the strengths of Western knowledge with the other eye. And then, most importantly, learning to see from both perspectives at the same time (McKeon, 2012, p. 136). Two-Eyed Seeing has been used in many disciplines in settler-colonial contexts of North America. It is also used in environmental pedagogy, because it is about seeing beyond binary to accept the interconnectedness between people and the natural world (McKeon, 2012). In Malta, this may take the form of bridging traditional ecological practices with modern science education, opening up pluralist, transformative approaches to sustainability.

Ways forward: enacting a critical environmental pedagogy

To move toward a critical environmental pedagogy in Malta, transformation is needed at both the pedagogical and institutional levels.

At the classroom level, dialogue is central in critical pedagogy and meaningful environmental education. It creates space for students to engage with complex and urgent issues, including climate change, environmental justice, and colonial legacies. As stated by Wink (2011) 'dialogue is change-agent chatter ... it is a framework for learning and teaching that turns passive learning into engagement and inquiry' (p. 65). Dialogue can start to cultivate a historical

consciousness, critically examining the social and political structures that contribute to present day realities. It allows for learning that is not only intellectual, but embodied and relational. Many educators in this study emphasized the importance of involving emotions and personal experience in environmental teaching.

Importantly, dialogue can also politicize environmental discussions. Critical pedagogy does not aim to be neutral; it seeks to examine and challenge social structures and sedimented systems of power (Giroux, 1997). In the context of environmental education, dialogue can surface about how land use, access, and knowledge have been shaped by colonialism, development, and economic policy. This kind of inquiry invites students to see the environment not as a static backdrop, but as a deeply contested and political space.

There is already precedent for this kind of work. In peace education, for example, educators have used dialogical approaches to critically examine History as a field shaped by perspective, power, and ideology (McCully, 2012). I believe a similar paradigm shift is possible, and needed, in environmental education. We can begin with questions like: What materials, pictures, and stories shaped how we think about the environment in Malta? How did you learn about the environment, and what is your relationship to it now? Dialogue can help learners develop a historical consciousness that links past and present land practices, challenges assumptions, and builds a deeper sense of connection and responsibility.

A critical environmental pedagogy may also require a re-orientation of the teacher's role, from *transmitter* of knowledge to *facilitator* of inquiry and learning. This means creating space for student experiences and emotional responses to be a part of the learning process – this is echoed by many educators on this study, who emphasized the importance of involving emotions and personal experience in environmental teaching.

At the institutional level, systemic support is required to make these pedagogical shifts sustainable. Teachers in this study spoke about a tension between their pedagogical values and goals, and the constraints of a rigid curriculum. This points to a need for structural transformation in how environmental education is understood and supported across the formal education system.

Policy Recommendations:

1. Fund professional development in critical, place-based, and land-based pedagogies.

Provide ongoing support for teachers specifically in environmental education, including training in dialogic methods and reflective practice.

2. Support educator autonomy through flexible curriculum design.

Encourage schools to adapt curricula based on local ecological contexts, student interests, and community relevance.

3. Establish national guidelines for outdoor and experiential education.

Affirm the importance of land-based learning and incorporate outdoor education as a core component of environmental education at all levels.

4. Revise assessment approaches for environmental learning.

Move away from rigorous standardized testing and instead prioritize meaningful self-reflection and critical thinking in student assessment.

5. Integrate local and generational ecological knowledge into curriculum materials.

Review textbooks and classroom resources to ensure they center local and context-specific ecological material.

Future research could explore how principles of critical pedagogy can be embedded in national curricula and what forms of professional development most effectively support teachers' critical reflection.

Conclusion

Returning to the research questions, participants collectively identified several characteristics of the current state of environmental education in Malta. First, regarding how educators experience environmental education in Malta, participants noted that the formal education system presents structural limitations that hinder meaningful environmental learning. These include a content-heavy curriculum, and examination-oriented pedagogy; this has also been identified in previous studies (Mifsud, 2012). In practice, this aligns with a transmissive model of education, which, according to the principles of critical pedagogy, functions to reproduce dominant (environmental) ideologies. This dynamic, influenced by historic legacies of colonial education models, risks depoliticizing environmental and climate issues, and reducing complex sociopolitical problems to technical solutions. Environmental education is also shaped by teachers on multiple levels. Systemically, they experience reduced pedagogical agency due to the rigid structure of the state school system, which may limit innovative or non-traditional approaches. Individually, teachers' environmental attitudes and ideologies have a significant influence on how they teach about the environment, often more than the curriculum itself.

Participants also described a widespread disconnection between people and the natural environment, also found in previous studies (Pace, 2009; Restall et al., 2021). Drawing from post-colonial theory and the results of this research, I suggest that nature disconnection may be partly rooted in Malta's colonial history. The use of foreign environmental textbooks may have positioned British-based environmental materials as 'official knowledge' marginalizing local ecological knowledge and leaving students disconnected from their own landscapes. As one educator described, this required a process

of ‘de-learning’ what they were taught in school in order to teach in ways more relevant to Malta’s environment. In response to research question two, influences of colonialism are reflected in current environmental education through a long-term reliance on foreign curricula and materials, the marginalization of local ecological knowledge, and the lingering effects of a system that historically positioned colonial perspectives as authoritative, shaping both what is taught about the environment and how it is understood. In response to the third research question, this research suggests that a critical environmental pedagogy has the potential to meaningfully connect learners with natural space, to see themselves as agents of change, and empower action in environmental protection and regeneration. This approach might start by recognizing environmental education in Malta as a contested discipline, shaped by colonial influence. This pedagogy can center generational and place-based knowledge that has been dismissed or subjugated, and support the process of learning, ‘de-learning,’ and learning again. As one participant said, it is an education that ‘*gets you to explore, investigate, research, get curious. To aim to live in a better world.*’

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