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# Achieving a Common Future for all Through Sustainability-Conscious Legal Education and Research Methods

**Abstract:** This contribution explores ecological literacy as a critical facet of legal inquiry, focusing on expanding knowledge and practices oriented towards nature protection. Evolving to encompass interdisciplinarity and a systems-thinking approach, ecological literacy is crucial for achieving environmental sustainability. The study argues that integrating an approach promoting eco-responsible behaviors is essential for sustainability-centered legal research and education. This necessitates a shift in foundational pillars of legal methodology, moving beyond conventional dogmatic approaches and embracing a participatory and active dimension. The study provides a theoretical foundation for future applications for rethinking legal methodology to implement ecological literacy effectively.

**Keywords:** sustainability; ecological and emotional literacy; legal domain

# 1 Introduction: The Intertwined Dimension of Education and Research in Ecological Literacy

## 1.1 An Unexplored Field in the Legal Domain

This contribution tackles ecological literacy (EL) as a domain of legal inquiry aimed at expanding nature-protection-oriented knowledge and practices. Originally coined as "environmental literacy" when Charles E. Roth (1968), American environmentalist and educator, asked "how shall we know the environmentally literate citizen?", the terms ecological literacy and ecoliteracy have evolved in more recent decades to comprehend the interdisciplinarity and systems-thinking approach needed for

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achieving environmental sustainability (McBride et al. 2013). EL (Cutter-Mackenzie and Smith 2003; Kaya and Elster 2019) encompasses a broad array of activities and consequently outcomes, including: improved knowledge and understanding of various environmental concepts and issues; cognitive and emotional understanding of humankind's position in altering the natural environment and sustainability; interest in learning about and embodying environmentally responsible behaviours; and skills such as critical systems thinking, communication and attitude to collaborative efforts towards a more sustainable local and global community.

In this study, EL is treated as an umbrella term comprehensive of both legal education and research in academic settings. Preliminarily to the analysis, it is worth noting that within the legal domain, EL is a relatively unexplored field – which is where this study has its main focus – and must be expanded upon and better integrated into legal education for effective solution-oriented approaches and practices to complex sustainability challenges (Dernbach 2010; Menon and Suresh 2020; Pipere, Veisson, and Salīte 2015). Nicole Graham (2014) contends that legal education significantly influences anthropogenic environmental change by shaping individuals into lawyers, judges, and policymakers. The prevailing conceptual framework in law education often fosters an unsustainable approach, segregating issues of entitlement to land and natural resources from responsibilities towards them. This separation in law curricula hinders the development of a cohesive environmental legal system that aligns rights with responsibilities among generations of legal practitioners.

Moving from this reflection, we argue that developing an approach to research and education that promotes eco-responsible behaviours is essential to sustainability-centered legal research and education. Such an approach requires rethinking the foundational pillars of legal methodology, moving away from the conventional dogmatic approaches constructed on the divide between education and research, and most importantly, conceiving this binomial in its participatory and active dimension. This study will therefore offer a theoretical base and some practical examples of how the legal methodology can be rethought and reshaped toward an effective implementation of ecological literacy.

## 1.2 Sustainability as a Frame of Mind

In this research, the terms education and research are used interdependently and are deeply interconnected to an active and collaborative dimension of the involved parties (educators, researchers, scientists, lawyers). When engaging in action research on sustainability, teachers and learners are seen as researchers (Bradbury, Lewis, and Embury 2019; Groundwater-Smith and Mockler 2016; Mertler 2009;

Somekh 2005) who have the opportunity to co-create ethically informed practices, enhance their response-ability, and strengthen their emotional knowledge, as well as advance their individual and collective coping strategies to sustainability challenges; hence, the interconnectedness between education and research.

The importance of education and research for sustainability emerges when realizing that sustainability itself contains the elements of education and action research or, in the words of Michael Bonnett, can be conceived as "a frame of mind" (Bonnett 2002). An integrated vision of sustainability as an education and research process helps us reflect on its essence and the core question that any law and policy development regarding sustainability should be concerned with: "What constitutes a right relationship with nature?" and "What should our basic stance towards the natural environment be?" (Bonnett 2002). In other words, delving into sustainability as a frame of mind and guideline for law and policymakers implies posing a set of questions about the basic understanding of our human identity and our relationship with nature.

Though the scholarship seems to progressively agree on the importance of embedding sustainability in the academic curriculum, effective education and research approaches focusing on complex combinations of interdisciplinary knowledge, understanding, skills, and values are widely recognized as inherently challenging and therefore still hardly applied in practice (Orr 1990). More specifically, the scholarship has underlined how non-disciplinary views and approaches to achieving education and research in sustainability are nearly absent in the literature (Molderez and Ceulemans 2018), and only few researchers have attempted to effectively develop non-traditional views of how students and academics can learn about sustainability and contribute to shaping sustainability solutions (Ceulemans, Molderez, and Van Liedekerke 2015). In particular, in their study on Paul Shrivastava, Ingrid Molderez and Kim Ceulemans observe how boldly, and pretty uniquely, the scholar Shrivastava promoted a culture of passion for sustainability that "can be taught using a holistic pedagogy that integrates physical and emotional or spiritual learning with traditional cognitive (intellectual) learning about sustainable management" (Ceulemans, Molderez, and Van Liedekerke 2015). According to this view, it is possible to expand the field of education and research to sustainability by developing innovative approaches and methods that facilitate real integrated and cross-disciplinary thinking and offer concrete solutions, also in the field of education and research, to the sustainability challenges (Molderez, Baraniuk, and Lambrechts 2021). Furthermore, David W. Orr (1990) argues that building a sustainable society is strongly linked to improving EC and that the concept of sustainability itself "implies a radical change in the institutions and patterns that we've come to accept as normal" (Orr 1990). Instilling a sustainability frame of mind in those involved in education and research can have a positive, long-lasting impact on both humans and the environment.

As hinted in Section 1.1, the importance of innovative and integrated educational and research approaches to sustainability becomes even more evident in the field of legal education and research to sustainability, where the tasks of lawyers and legal scholars consist of designing, drafting, implementing and managing sustainable solutions to the wicked problems posed by the environmental crisis. In legal education and research on sustainability, Bonnett's definition (2002) of sustainability as a frame of mind is perfectly fitting, as the law is expected to equip learners and researchers with education and inspiration for feasible solutions for sustainable living (Stone 2010), both in their personal and professional spheres, enabling them to develop a profound understanding of the interactions and consequences of actions and decisions. Enhancing EC within legal education and research which will eventually infiltrate into the legal system as a whole —thus instilling a sustainability state of mind— can foster decision-makers who have a greater sense of environmental stewardship and an awareness of how their actions can shape a sustainable future for all.

## 1.3 Positioning

The lack of effective and integrated legal education and research approaches to sustainability is the gap that this article addresses by offering concrete examples of how to frame and further develop a transformative approach to legal education and research. As will be further explained, and in line with the study conducted by Angela Moriggi et al. (2020), the transformative approach to legal education and research proposed in this study organizes the education and research practices developed in academic courses and research groups' experiences through three main thematic pillars: (1) ethically-informed practices, through instilling a 'care' lens that allows humans to situate themselves in relation to others and the planet; (2) development of response-ability, through recognizing the vulnerability and interconnectedness of living and non-living beings and the planet; and (3) emotional awareness, through nurturing cognitive-emotional skills such as imagination, creativity, and intuition to give humans the capacity to better understand and hope for a better future. The approach is grounded on the need to develop a strong context of inter-relationships and nature experience, overall focusing on the individual, community and planet. This is in line with the core issue of sustainability that Bonnett defines as our relationship with nature and how it ultimately shapes sustainability education in three dimensions: the individual, the collective and the planet.

For this purpose, the first part of the study examines how the complexity of the Agenda 2030 indirectly calls for composite responses merging education and

research outcomes through its urgency for collaborative, community effort towards sustainability. The interconnectedness of the SDGs and the role that policy can play in implementing society-wide changes is connected to the legal discourse. In its second part, the article provides concrete examples of experiential learning and participatory research whose application contributes to equipping legal researchers with the ability to respond to sustainability challenges, before concluding with lessons learned and future directions.

# 2 The Agenda 2030: The Complexity of Sustainability

The current global framework for achieving sustainability for all, which involves many sectors such as health, education, agriculture, industry and the environment (to name a few), was unanimously approved in September 2015 by the United Nations General Assembly (UNGA). The document "Transforming our world: the 2030 Agenda for Sustainable Development" (hereinafter: The Agenda) identifies a set of 17 integrated global goals (the well-known Sustainable Development Goals (SDGs)), composed of 169 targets and 232 unique indicators, which were set to be achieved by 2030. The Agenda, recognized and in effect in all 193 United Nations (UN) member states, aims to achieve a set of ambitious goals and targets through interconnected actions while balancing the three dimensions of sustainable development: economic growth, social inclusion, and environmental protection (Griggs et al. 2014). As highlighted in Section 1.1, for the purpose of this paper, the "environmental protection" dimension of sustainable development will be of main focus, drawing on the interconnected SDGs and how the objectives and indicators point towards education and research being powerful tools for achieving good environmental governance and sustainability.

In the Agenda, the SDGs and their respective objectives are preceded by two sections entitled Preamble and Declaration. In the Preamble, the UNGA enumerates the five pillars of the Agenda: people, planet, prosperity, peace, and partnership (Tremblay et al. 2020). Through characteristics of coherence and integrity (Coopman et al. 2016), the five pillars set the foundation for the systemic and interconnected approach that must be taken when working towards sustainability, in any capacity (Barbier and Burgess 2017). The commitment to implement the SDGs in a coherently integrated way is grounded in the overall objectives which hope to: end poverty and ensure that all human beings can realize their potential (Steiner 2018); protect the planet from degradation, adopt urgent measures against climate change, and ensure everyone a prosperous and satisfactory lifestyle; enhance economic and social

progress in harmony with nature; promote peaceful, just, and inclusive societies, free from fear and violence (Fisher et al. 2021; Sharifi, Simangan, and Kaneko 2020); and, finally, realize the potential of global solidarity, which includes the participation of all countries, stakeholders, and people (Spraul and Thaler 2020; Pinz, Roudyani, and Thaler 2018).

The Declaration follows with eight subsections, outlining that everyone must play a part in achieving sustainability and the importance of universal, collective action from stakeholders in low-, middle-, and high-income countries across the globe. More specifically, the Declaration urges that science and policy play a crucial role in finding solutions and implementing concrete actions for sustainability (McBean 2021), and although not explicitly stated, legal education and research—in their scientific dimension—also play an integral role in shaping the sustainability of the future. In the subsection *Our shared principles,* there are clear links made between achieving sustainability and international law, referring to the Charter of the United Nations, the Universal Declaration of Human Rights, and the Millennium Declaration, as well as to international environmental law sources such as the Rio Declaration on Environment and Development (Meuleman, Niestroy 2015). The UNGA recognizes that there are many challenges to achieving sustainable development, but points to the fact that we are currently living in a window of opportunity to create more interconnected knowledge societies (among other opportunities i.e., further developing scientific and technological innovation). Addressing the gap of EL within legal education and research while promoting sustainable education are just a couple of the ways to harness this "window" and therefore build a more environmentally-aware society that makes decisions with a sustainability mindset.

Examining the individual SDGs more specifically, it is clear that education and research play an important (if not, central) role in making global progress towards the objectives and indicators set to be achieved by 2030. Inherently, each of the 17 global goals cannot be successfully achieved without integrated solutions that simultaneously target the objectives of multiple goals due to the complexity of the challenges we are facing today. For example, any practice or policy implemented to *End hunger, achieve food security and improve nutrition and promote sustainable agriculture* (SDG 2) must also consider the SDGs that have objectives and targets relating to poverty, human health, education, planetary health, and consumption patterns – virtually each of the 17 goals. It is overwhelming to realize the interconnectedness of the goals and the collaboration that must be taken across all sectors and disciplines to truly reach a sustainable global society, yet empowering for the legal community who has the opportunity to shape education and research around instilling a sustainability mindset into those who will develop the policies and laws that lead to achieving the SDGs.

Consequently, legal education and research have the responsibility of developing methodologies, knowledge and tangible solutions for the realization of the overall vision and goals. The term "policies" is mentioned 32 times between the Declaration and 17 goals, with the overall theme of needing to implement national policies and programmes that fit under the framework of the Agenda while aligning with national policies and programmes. This reference makes it evident that the UNGA has the assumption that policies are the main tangible tool that must be focused on in order to achieve global sustainability. However, even in the mention of important stakeholders who play a key role, the UNGA neglects to mention how lawyers and policy makers (i.e., those in the legal discourse) hold the responsibility to create such policies and law. As mentioned above by Nicole Graham (2014), current legal education and research practices instil a "dephysicalized" perspective of the environment and teach its students that the planet should no longer be treated as a "thing" (Meuleman, Niestroy 2015). It is time to close the gap between the legal discourse and ecological literacy through recognizing that the planet is an integrated ecological system with an infinite amount of living, moving parts and processes (Meuleman, Niestroy 2015). Carrying out educational and research activities that instil a sense of responsibility and care for the planet will influence future lawmakers and the subsequent policies they develop which (hopefully) consider the environment at all costs.

Along these lines, and with the intent to show some practical and effective applications of an innovative approach to integrated legal research and education, the following section expands on several examples of how to shift away from conventional legal teaching and research methods toward nature-based, participatory methods that foster a sustainability frame of mind.

# 3 Examples of Education and Research for Transformative Change in Sustainability

## 3.1 Introduction

The two sections of the Agenda described above (the Preamble and Declaration) contain statements that, if not accompanied by the assumption of responsibility and actual plans of action, risk remaining empty and rhetorical statements of principle (Murray and Poto 2022). This contribution shows how understanding and implementing the vision that emerges from the 17 SDGs assign a new role to legal education and research, by requiring them to generate and disseminate knowledge to achieve sustainability. Following the three thematic pillars of transformative change as

elaborated by Angela Moriggi et al. (2020) and described in Section 1, this section offers practical examples of how legal education and research on environmental matters can offer tools for concrete implementation strategies to give substance to the objectives and overall mission of the Agenda. In particular, it will describe some education and research practices developed and adopted as implementing activities of the research project "An Exchange Program on Empathy Compassion and Care in Water Governance, from the Perspective of Integral Ecology (ECO_CARE 2023). The examples will be organized following the above-described matrix developed by Angela Moriggi et al. (2020), in the tripartite form of a care-based approach that leads to transformative change through: (1) ethically-informed practices; (2) response-ability; and (3) emotional awareness.

## 3.2 Ethically-Informed Practices: An Example of Teaching and Research through a Story About Knowledge

As an example of ethically-informed practice (1), the teaching and research developed from the two books "A Story About Knowledge" (Porrone, Poto, and Russo 2021a, b) (hereinafter, the handbook) and "A Story About Knowledge. Illustrated version" (Porrone, Poto, and Russo 2021a, b), (hereinafter, the silent book) show how, also in legal education and research, it has been possible to co-create ethically informed practices engaging with a legal context, embracing playful experimentation (Fazey et al. 2018) and experiencing the tension toward empowerment, by reframing relations of powers.

The two books are educational and reflection-provoking resources rooted in an Arctic Indigenous story about the search for knowledge, which in the end turns out to be ecological and emotional knowledge. Story characters and plot belong to the Native American – Anishnaabe – storytelling tradition connected to the myth of Nanabozho, and its relationship with water (Perkinson 2019; Smith 2020). As will be further explained, these resources have been applied to the research workshops and University curricula developed within the umbrella of the ECO_CARE project (ECO_CARE 2021-2025), in undergraduate courses as well as in Master's Programs. Moreover, the teaching materials were used to lead research seminars on the theme of situated knowledges: in 2022, in Bayreuth (Hayden et al. 2022) and on a research expedition in the Northern Sea (Panieri et al. 2022); and in 2019–2020 as part of the core activities complementing I and II year students' doctoral training in Global Studies. Justice, Rights, Politics (University of Macerata, Italy, Department of Political Science, Communication and International Relations). Finally, the teaching methodology has also been adopted in an interdisciplinary Master's program

on Global Health, with a specific focus on Arctic Governance (McMaster University, Ontario, Canada 2021–2023).

The story at the core of the two books follows the nested loops technique, enabling the core message ("Where can knowledge be found, hidden and preserved?") to be communicated and discovered through several narratives delivered within one story (Petrovic et al. 2022). The story is chosen for its focus on the collective search; one that bridges human and non-human worlds with underlying principles of care and responsibility, for the best place to find and have custody of knowledge.

The story begins with a research question posed by the creator to the trickster spirit named Nanabozho, to find that place where knowledge can be found, and from the trickster spirit, the task is delegated to the animals of the Earth (symbolically represented by Arctic animals: a bear, an eagle, a salmon, and a mole). The search becomes an interactive, situated, and delocalized thought-provoking process. Each story character situates their answer based on their knowledge of the habitat they live in: the bear knows the mountains, and is sure that knowledge can be found, hidden and treasured on top of them; the salmon is the knowledge keeper of the secrets of river courses and sea; and the eagle, created to soar above the heights, provides her knowledge of the high altitudes in the sky. In the unfolding of each animal's nest, the story leads to the final conclusion of the mole, who seems to be the only one able to provide the correct answer to the trickster's question. Although the mole is not gifted with any apparent eyesight, she is gifted with great vision. In her view, knowledge is found and guarded in the heart of the earth.

The multi-layered theme of this story is found in the fact that there are potentially limitless interpretations of how the problem of the search for (ecological and emotional) knowledge can be solved, and these interpretations depend on the audience, the positioning of each member and also the relationship between the audience members. For example, among the answers we collected through carrying out this activity with legal scholars, it was interesting to note that the scholars studying ecological restoration as a collective act, agreed on the fact that it was not the last animal that provided the answer, but rather the "right" answer blossomed out of a collective sum of the individual efforts of all the animals involved in the search (Hayden et al. 2022). Following the story plot, the handbook develops educational insights and stimulates a debate around each animal character, their roles, the relational aspects that are generated from their search, and their deep interconnectedness with nature, as well as with the community of readers and researchers engaging with the story.

In parallel with the lessons developed in the handbook, a co-created and illustrated book project, the silent book, based on the same story plot as above, continues along with the conceptual idea of the need to engage in conversations around the

relational dimension of ecology (Porrone, Poto, and Russo 2021a, b). In this latter case, the investigation process is situated in fictitious and coloured settings (the mountainside, airspace, waterside, and underground). Numerous art prototypes display the crucial moments of the animals' search for knowledge and the consequent full immersion in and interaction with their own environment. This silent book helps readers and learners engage in the search for knowledge by giving them a voice and transforming them into storytellers and interpreters of the story (Garan and DeVoogd 2008).

Seminar series and academic lectures organized around these two books provide examples of ethically-informed practices firstly by inviting the audience to develop a sense of engagement with the learning context; a sense of place, represented by the situated answers of each animal (Judson 2010); and a sense of community, extending beyond the community of animals and embracing the community of learners, giving life to what the scholars call an eco-sociological model (Yıldırım and Hablemitoğlu 2013). The skills and lessons realized through this type of learning activity become foundational moments toward the development of sustainability values.

When workshops and lessons around "A Story About Knowledge" are carried out, the sense of place and community is further ignited by the education and research protocol of respect and mutual understanding that is instilled in the development of the learning and investigation experience (Fitzpatrick et al. 2016; Koster, Baccar, and Lemelin 2012). At the beginning of each session, and following the Indigenous practice of acknowledging traditional territories hosting the human communities, an expression of gratitude to the hosting place is expressed by the session leaders (Blenkinsop and Fettes 2020). At times, the session may begin with the practice of story reading and storytelling; reading or telling the story aloud is also a tool to strengthen a multisensory connection with the space and the community audience (Fernández-Llamazares and Cabeza 2018). Afterwards, space is dedicated to sharing and reporting back preliminary impressions, before initiating a deeper conversation around the subject matter. Before, during, and after the sessions, participants are encouraged to engage with the learning materials and stories by providing written answers, as well as their visual creativity. Creative answers brought forward through designing and colouring journaling prompts, are highly encouraged and recommended so that creativity becomes a fundamental tool of pedagogy for ecological education (Capra 2007) by encouraging the learners to be engaged in conscious acts of gentle exploration of their abilities in their surrounding space (Inwood 2008). Engaging with the learning toolkit through journaling exercises and prompts can be construed as part of a collective therapeutic process that brings awareness to the need to heal the planet by restoring our relationships and improving overall human health by creatively engaging with inner and outer

conflicts (Larsen and Johnson 2017). The personal and community work outside the seminar room contributes to spurring new conversations, allowing us to discuss key issues in greater depth, and elevating the richness and complexity of mutual understanding. Through these continued conversations, which consolidated into ethically informed practices of education, the key underlying principles forming a common conceptual framework of integral ecology are identified through the relationship with the environment and the affected peoples.

The experience of delving into collaborative educational and research activities, and thus engaging in a reciprocal effort to co-create and look for solutions, shifts the conversation toward purpose, intention, and consciousness of the socio-ecological interdependencies. Discussing concerns for the biophysical environment including climate change threats, economic and social disparity, and inadequacy of the Western-centric legal approaches to overcome poor environmental governance, leads these ethically informed practices to reflective questions on the need to develop a sense of relational accountability and individual, collective, and planetary search for solutions are understood as part of a ceremony (Wilson 2008).

In this sense, and in response to the different calls for ecological education, the goal of quality education (SDG 4) coordinated with other SDGs (such as 13, 14 and 15 among others), is being reframed through the ethically informed practices of storytelling to prioritize not only academic learning and scientific research, but also social, emotional, and ethical competencies (Cohen 2006).

## 3.3 How Sustainability-Conscious Legal Education and Research Strengthen the Ability to Provide Responses: Co-creating Legal Materials with the Chiquitano People from Mato Grosso, Brazil

Looking at the Agenda's commitments and objectives from the perspective of environmental response-ability is crucial to ensure that the sustainability vision is transformed into the ability to provide effective and practical *responses* to the many complex and interconnected challenges of sustainability. Rendering each other able to provide responses is the key role that legal education and research (Bozalek 2020) are asked to play within and beyond 2030, by raising awareness on the need to develop a sense of response-ability among individuals and community as a whole to repair the harm to the environment and build up different relational and ethical systems that prevent future harm (Haraway 2015). Thus, teachers, learners and researchers become effective ability trainers and response-givers to the sustainability challenges. Sustainability-conscious education and research (Greuenewald

2018) aim to strengthen this ability by enhancing awareness of the need to repair the harms and by building a relational sense of solidarity and mutuality (Noddings 2013).

Developing the ability to connect with others (Banks 2011), through environmental education and literacy, activates the capacity to 'care about', an internal state of readiness, and a commitment to the possibility of caring for strangers or distant others, which precedes the actual practice of caring. The ability of responsiveness builds upon multiple ethically-informed practices of relationality: the more we engage in attentive relationships, developing a sense of place and a sense of community, the stronger our ecological identity becomes, building our feelings of empathy, compassion and care for others.

An example of this collective experience of building up these three emotions and therefore strengthening responsiveness abilities is provided by one of the co-created activities carried out by the ECO_CARE research team with the Chiquitano Community of Mato Grosso, Brazil.

In collaboration with local scholars from Brazil, cultural mediators, law students, community representatives and school communities, the ECO_CARE team created a series of visual and narrative materials on environmental participation with and for the Chiquitano People of Mato Grosso. The project, entitled 'Legal Design and Visual Law in International Environmental Law: Conversion of the Escazú Agreement in Visual Materials for the Chiquitano People', was developed during the related academic course, throughout the year 2020, by the students of the Universidade Federal do Estado do Rio de Janeiro, Postgraduate Law Program and with the active participation of the Chiquitano People from Mato Grosso. The objective of the project was to teach, in practice, an efficient method to create a knowledge base of participatory environmental law, as well as co-develop educational materials that could work as a tool for strengthening environmental participation. The project participants were assigned to three thematic areas, corresponding to the three pillars of environmental participation, and critically revisited through the three mentioned emotions: respectively, access to information was associated with empathy, as the ability to feel for others; participation was connected to compassion, as the ability to feel with others; and access to justice was connected to care, as the ability to take restoring action (ECO_CARE 2021-2025).

The leader of the academic team was a Chiquitano student and young scholar, Silvano Chue Muquissai, who holds membership in one of the communities the team has been working alongside. Silvano has strong social and family ties to the *aldeia* ('village' in Portuguese) of Vila Nova Barbecho, as this is where he lived until he left for his post-secondary academic studies. The development of this community-based project therefore built upon a very strong base of relationships and kinship with the community members (Desai and Smith 2018), and was shared in a relational connection, which has been essential to all stages of our project, most particularly in

its early development when it was crucial to build trust and gain community understanding of the project vision, scope and long term objectives. The education and research project formally began with many community meetings involving researchers, law students, residents, teachers and spiritual leaders (*pajé*, in Portuguese), and elders seeking to elicit local perceptions on key environmental issues among the Chiquitano communities in different villages in Mato Grosso. This resulted in various discussions with students and community members through meetings and focus group sessions that enabled a better understanding of local environmental concerns. The meeting point between the community needs and the project vision was found in the co-created version (in comics) of the Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (Escazú Agreement 2018). The community members took part in the project, actively becoming the protagonists and discussing the possibility of transforming the Escazú Agreement into an accessible format, where different understandings and concerns could be voiced and the role of the Chiquitano People could become effectively visible. Thus, the community chose to imagine and develop a comic format for the Agreement (i.e., a manifestation of visual law): the voice was given to the community members who played an active role in participating in the creation of an accessible version of the Agreement, through the construction of co-developed dialogues. Accordingly, the legal provisions on participation of the Escazú Agreement, written in technical legal language, were cooperatively translated into an easily accessible dialogue, understandable by everyone. Each sentence in the comic dialogue was paired with pictures from the village, representing places and people that different individuals could recognize and relate to within the story. The pictures of the community were transformed into cartoons by students and community members and accompanied by corresponding speech bubbles. The final work consisted of two versions of the Agreement in comics, in Portuguese and English, where the Indigenous Chiquitano People of Vila Nova Barbecho converses on the individual and collective understanding and interpretation of environmental participation as regulated in the Agreement.

As a final restitution act, the books were returned to the community, and a series of video documentaries on the process of co-creation, and the building of trust, mutual understanding, and empathy-building between the community of researchers, students and the Chiquitano communities (Rebelo, Mehmood, and Marsden 2020). By strengthening the bond between the Indigenous community, its space, and the community of learners, a sense of ecological identity was developed and, through effective participation in education and research, a collective ability for responsiveness to environmental challenges was created.

This co-created approach to research education parallels the essence of situated and community-based education which aims to transform the Western conventional

approach of educational institutions to include the spirit of community, a re-imagined relationship to nature and a commitment to the responsibilities that grow from that relationship (Sobel 1995).

Central to the process of building responsiveness through the community practice of co-creating learning materials were the attributes of healing, participation, storytelling, categorizing harm, and accountability. Healing and participation were closely correlated to the process of involvement and cooperation between the community of students and the Chiquitano community members. Conversations and collective brainstorming on the creation of the most accessible legal tool that could effectively give voice to the unvoiced led toward relational and emotional healing through the practice of 'restorying' the experiences, integrating and understanding both the root causes of the problems as well as the responses to them. Storytelling and identifying harms helped develop conversational empowerment and inclusion of perspectives, as well as situating events and persons in time and place, and therefore contributing to develop collective consciousness and accountability (Aarnio-Linnanvuori 2019; Gallhofer et al. 2000).

## 3.4 Ecological Literacy and Emotional Awareness for a Sustainable Future: Follow Your Heart

Another example of practices toward transformative change in research and education is represented by programmes that stimulate emotional intelligence and competencies as a central element to learning, to foster future generations with an awareness of the relationships with themselves, others, and their surrounding environment. Addressing the gap in EL within a legal education and research context is not possible without building emotional intelligence since EL requires the ability to integrate "empathy, seeing others' perspectives, and cooperation with an understanding of and respect for natural systems" (Jordan 2013). The co-creation of the education and research resource 'Follow Your Heart: the school for multi-potentialites' (Poto, Murray, and Russo 2022) (hereinafter Follow Your Heart) forms part of this scenario with a playful, yet scientific approach to improving emotional intelligence, ecological literacy and an overall appreciation for creativity and mindfulness. The book project developed from the original idea of the illustrator, Valentina Russo, whose personal experiences led to the realization and motivation for implementing more emotional literacy and creativity within elementary and secondary education, and potentially higher education (Poto, Murray, and Russo 2022). Continuing on the path of creativity and participatory methods for education and research practices that instil a sustainability frame of mind, ECO_CARE supported and developed the original project plan (written in Italian) into an English

teaching resource with a multipurpose scope (scientific, educational, and playful) (Poto, Murray, and Russo 2022). As mentioned above, the ECO_CARE research group develops education and research approaches that bring empathy, compassion, and care into the world of environmental law and sustainable development, and felt inspired to take on this project with the belief that focusing on emotional literacy within youth will lead to future generations who have the emotional-cognitive skills to imagine and create a more sustainable society (ECO_CARE 2021–2025).

Through the iterative process of developing Follow Your Heart into a co-created and dynamic learning and teaching resource, and an educational philosophy overall, the authors structured the book in a way that speaks to the interests of young learners, educators, and researchers. Within the primary and secondary school systems, learners and educators might use Follow Your Heart as inspiration to reimagine their learning spaces and stretch the boundaries of traditional school curriculum to strengthen imagination and creativity – important skills to nurture in the case of improving emotional awareness, according to Angela Moriggi et al. (2020). For researchers and higher education, the themes, concepts, and activities of Follow Your Heart can be further explored through academic courses, community-based research, and interconnected outreach on emotional education, environmental awareness, compassion, ethics of care and human rights.

With the aim to create space for the development of emotional education and support present and future generations in their effort to make the world a better place, the book is built upon solid research that supports the importance of co-created approaches for achieving a common future for all (the ultimate objective of sustainability) (Szetey et al. 2021). One unique characteristic of Follow Your Heart is its dual participatory element, which is linked to the co-creation of sustainability approaches: the resource (1) encourages the participation of its target audience members as participants and co-creators of the educational resource itself and the subsequent materials that will continue to develop, and (2) describes a curriculum and teaching style that encourages the active participation of pupils and students in their learning to foster deeper engagement with learning outcomes, and a greater sense of autonomy and belonging (Billett and Martin 2018). Along with creating an environment that views participation as a central element in education and research, Follow Your Heart welcomes creativity, imagination and multiple talents (elements lacking in the Western education context), which can shape the minds and hearts of learners into eager citizens who remain hopeful in the face of difficult challenges and inspired to find sustainable solutions (Egan 2015).

Embedded in the first part of the Follow Your Heart book, a fully-illustrated children's story called "The Story of Cora" visually demonstrates the pressure that comes from the question adults often ask children, "what do you want to be when you

grow up?" (Poto, Murray, and Russo 2022). One of the themes in Follow Your Heart is to shift away from this question, which limits imagination and creativity while encouraging children to pick a linear path from an early age. The second part of the book contains evidence-based research supporting emotional education and gives examples of multipotentialites such as Malala Yousafzai and Wangari Maathai who have learned how to use their multiple talents and emotional intelligence to work towards a more sustainable future (Poto, Murray, and Russo 2022). The book's final part is a co-created 'activities' chapter with contributions from various educators focusing on developing emotional awareness and an understanding of the inter-connectedness between humans and nature and the responsibility we have to care for each other. Teaching pupils to care for others sets the foundation for strong interpersonal and social relations with all beings, including a sense of responsibility and care for the natural environment (Sauvã 1999). Overall, a curriculum that includes mindfulness activities, outdoor learning, multi-language and multi-age classrooms, while embodying and instilling relational thinking, has the potential to raise children with a sustainability mindset and the skills to tackle complex challenges; children who will become future lawyers, policymakers and politicians who need the skills and self-awareness to create and implement innovative solutions to build a more sustainable society.

In the legal context, emotional intelligence programs such as Follow Your Heart can and should be engaged with in higher education since the acquisition of theoretical knowledge and technical skills, although necessary, are no longer sufficient for working with the complex challenges our society is currently facing (Gilar-Corbi et al. 2018). As with Follow Your Heart, there must also be a paradigm shift in higher education towards recognizing the multiple potentialities that exist within individuals and teaching them how to utilize their diverse talents (outside academic environments). Developing emotional and social intelligences and making time and space to give students to opportunity to re-discover their creativity, imagination, and autonomy (alongside the necessary university curriculum) will benefit the individuals themselves by giving them the confidence and skills to work cooperatively with others and their surrounding natural environment.

Thus, the resource encourages the development of intergenerational programs on emotional awareness, especially starting from an early age. The typical Western education classroom is not usually viewed as a place to foster creativity, imagination, and emotions, but rather as academic excellence and discipline. Follow Your Heart promotes educational approaches that enhance emotional and ecological knowledge, recasting the role of children and teachers as agents of intergenerational learning in environmental and sustainably conscious education and research (Instead, and Shapiro 2014).

# 4  Concluding Remark and Ways Forward

This study has shown the importance of investing in ecological and emotional literacy as an integral element of the legal inquiry on how to reach environmental sustainability. Legal education and curriculum are heavily theoretical and technical, embedded in traditional (Western) ways of knowing, and are currently not sufficient in equipping lawmakers and policymakers with an eco-literate mindset – one that ensures sustainability is intertwined in all aspects of their work. Thus, developing ethically informed practices, strengthening a sense of response-ability and enhancing emotional awareness is a tripartite approach that is recommended in the endeavour to cultivate caring, empathetic and responsible graduates of legal education and research programs. Examples of these three practices have been tested and implemented in various geographical academic settings and demonstrate a way forward in which education and research are committed to the achievement of 'Our Common Future', following the ambitious indication of the Agenda 2030. Thinking of a way forward is, therefore, the second step after the establishment of education and research foundations based on ecoliteracy and emotions, which follow the direction of environmental experts such as David W. Orr (2011) who recommends the continuing development of experiential education and research, specifically informed by the interconnectedness of nature. Attempts should be made to go beyond linear thinking and toward a systems thinking approach, both applied to knowledge systems and to the relational dimensions of the knowledge seekers (teachers and students) (Orr 2011). Relational thinking instils situationality and allows citizens to understand their place in the current global vision of achieving sustainability for all. Essentially, improving ecoliteracy in legal education and research is, in a sense, "eco-designing" (seen, by David Orr, as a complementary activity of ecoliteracy: Orr 2011) a community of care, where individuals, communities and the planet are part of the same learning experience – this is the main direction that must be followed in the preservation of our common home, the planet (Orr 2011). Without reshaping education and research to foster a sustainability state of mind, the environment will continue to be governed in such a way that does not reflect caring and responsibility, leading to further degradation.

In the future, the different practical examples developed and tested in the project ECO_CARE can be upscaled and applied in other contexts and situations. Conducting research to investigate the long-term beneficial impacts of these practices on the restoration of the relational fabric of society can help to expand the evidence base supporting ecological education, especially within a legal context. Collaborating with educators, researchers and academic institutions as a whole who

have integrated emotional and ecological education within their programs is another way forward, to develop a framework to guide those who want to reshape their curriculum. Additionally, students and educators may be surveyed in the future to investigate what aspects of the ecoliteracy curriculum should be further addressed and developed, which would also contribute to creating an overall framework or set of guidelines to reshape legal education with grounding principles of ecoliteracy and sustainability. Consequently, based on the consolidation of these practices and the research studies that come forth, policymakers could be informed on the relevance of ecological and emotional education to provide concrete responses to complex sustainability challenges. Further research following this study, including a larger number of students, schools and communities, is expected to be conducted in the near future to build upon the tools for developing ethically informed practices, response-ability and emotional awareness.

Instilling a sustainability state of mind and integrating practices to strengthen ecological literacy is important across all disciplines and ages, and is a gentle step forward towards the co-creation of a common future for all.

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