A Critical Analysis of Environmental Education in Mexican Preschools: Images of Childhood and Pedagogical Models

Adriana Burciaga González

University College London

This dissertation is submitted for the degree of

Doctor of Philosophy in Education.

Declaration of Originality

I, Adriana Burciaga González, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

i. Abstract

This is a qualitative study about Environmental Education (EE) in Mexican preschools. The purpose of this research is twofold. On the one hand, it aims to explore the ways in which EE is understood and practised in two Mexican preschools with contrasting pedagogical approaches and on the other hand, it seeks to critically analyse how dominant images of childhood and pedagogical models influence the ways in which EE is understood and practised in these Mexican preschools.

This study consisted of two case studies. One is a private independent preschool fully guided by the Waldorf pedagogy (also known as Steiner education) and the other is a semiprivate preschool guided by the Mexican national curriculum and inspired by the Reggio Emilia approach. The main data collection methods used were interviews with 4 and 5-year-old children using a photo elicitation technique, interviews with teachers and other academic staff, interviews with parents, as well as class observations, other naturally occurring data such as children's conversations, drawings and models were also included.

This thesis is framed theoretically and methodologically by a poststructural approach (Foucault, 1976;1982; Weedon, 1992) and sociological theories of childhood (James, 2010; James, Prout & Jenks, 1998; Jenks, 2004; Kennedy, 2000; Smith, 2012; Sorin, 2005). It unfolds from the premise that diverse images of childhood generate practices which regulate the adult/child relationships (Duhn, 2012; Kennedy,2000; James, 2010; Jenks, 2004; Smith, K., 2012, Sorin, 2005; Woodhead, 2006). The central argument in my thesis is that certain images could either limit or facilitate the possibilities to move towards more critical views of EE in which both children and teachers are recognised as competent citizens and social agents of change that can work together within a democratic community towards a more sustainable world.

Ultimately, this thesis sheds light on how certain images of childhood, particularly romantic notions of natural childhood and developmentally driven images could limit the possibilities to move towards more critical and active approaches of EE in Early Childhood Education and Care (ECEC) that recognise children as social agents, and fully value children and teachers' potential to contribute to a more sustainable world.

ii. Impact Statement

This study adds to the body of original knowledge in the field of Environmental Education (EE) in Early Childhood Education and Care (ECEC). This thesis provides a critical analysis of EE at the preschool level in Mexico, and it is a pioneer in the field as it brings together the voices of young children, teachers, and parents in a context where not only research on the matter is scarce but also where young children have been largely ignored. Moreover, this thesis offers a deep contextualised analysis of EE conceptualisations and practices in Mexico, thus shedding light on perspectives from non-western countries that are much needed in the field. In that sense, this study paves the way for future research that specifically focuses on the preschool level and that includes and values young children's perspectives.

Furthermore, my study integrates a variety of concepts and theoretical underpinnings that contribute to expanding the ways of investigating and comprehending EE in ECEC. Because this study takes discourses and images of childhood as generative mechanisms from a sociological perspective, it is a call for more research that challenges dominant positivistic approaches to science and questions taken-for-granted notions of childhood, ECEC and the environment. This research is thus relevant for anyone interested in children's education and care, from academics, students, to ECEC practitioners, NGOs, parents, environmentalists and policymakers.

This research journey and the steps taken along the way have already helped to raise awareness and gain attention on the topic, both inside and outside academia. For instance, the dissemination of my research at various study groups at the UCL Institute of Education and other academic events, such as the IOE's Doctoral Summer Conference and the Development Education Research Centre's seminar series, has sparked rich academic discussions that have contributed to building connections with other students and colleagues from different disciplines.

Additionally, in non-academic environments, I have also had the opportunity to talk to many people about my research, particularly during my fieldwork in Mexico, and this was a way of attracting the curiosity and interest of many children, teachers, parents and stakeholders.

iii. Acknowledgements

iv.   Contents

v. List of Tables

vi.   List of Figures

vii. List of Acronyms

ANMEB	National Agreement for the Modernization of basic education
BERA	British Education Research Association
CENDI	Child Development Centre
CONAFE	National Council for Educational Promotion
DIF	National System for Integral Family Development of Mexico
ECEC	Early Childhood Education and Care
ECECfS	Early Childhood Education and Care for Sustainability
EE	Environmental Education
ESD	Education for Sustainable Development
IMSS	Mexican Social Security Institute
INEA	National Institute of Adult Education of Mexico
ISSSTE	Institute for Social Security and Services for State Workers of Mexico
OMEP	World Preschool Organisation
PROFEPA	The Federal Attorney for Environmental Protection of Mexico
RIEB	Integral Reform of Basic Education
SEDESOL	Ministry of Social Development
SEP	Ministry of Education
UN	United Nations
UNESCO	United Nations Educational, Scientific, and Cultural Organization

1. Introduction

This study is both exploratory and analytical in nature. On the one hand, it investigates how Environmental Education (EE) is understood and practised in two different Mexican preschools with contrasting pedagogical models while, on the other, it critically analyses how images of childhood act as mechanisms that can either hinder or promote more critical approaches of EE. The focus of this study turns on two central axes: it seeks to analyse how both images of childhood as well as associated pedagogical models influence the praxis of EE in Mexican preschools. This research, which comprises of two case studies, is positioned within a poststructural approach and sociological perspectives of childhood. The first case focuses on a semi-private preschool guided by the Mexican national curriculum and the Reggio-Emilia pedagogy. The second case is a private independent preschool led by Waldorf pedagogy (also known as Waldorf education or Steiner education). Qualitative methods such as interviews and observations were used to examine the views of four- and five-year-old children, their teachers and parents, all the while considering the local contexts, pedagogical models, the education system and the dynamics of knowledge and power that shape them.

EE can be seen as "an approach, a philosophy, a tool, and a profession" (Monroe, Andrews & Biedenweg, 2008, p. 205). As a concept and as a field of study, EE has evolved over time—resulting in the myriad meanings and approaches which currently exist. Some go from narrow views that centre merely on educating *about* the natural world, whilst others encourage education *in* the environment. There are also broader approaches, such as Education *for* the Environment, that see EE as a critical pedagogy which aligns with the principles of sustainability and focuses on transformation and action. This triumvirate of EE approaches was first proposed by Lucas (1972) and has been widely used in the field (Robottom, 2005; Stevenson, Wals, Heimlich & Field, 2017; Tilbury, 1995).

In the realm of ECEC there has been reluctance to engage with critical EE approaches; furthermore, the image of young children as social agents who actively participate in decision making, understand, and question environmental issues is still controversial and not fully understood (von Braun, 2017). Scholars and international

organisations alike have argued that pedagogies which encourage learners, including young children, to be critical thinkers and active participants in their own lives are necessary to attain a more sustainable world (Davis, 2005, 2008; Elliott, 2010; Pramling Samuelsson & Kaga, 2008; Siraj-Blatchford, 2009; Wilks, Nyland, Chancellor & Elliot, 2008; Sterling, 2004, UNESCO, 2015). However, this topic has not been examined enough and there is an overall lack of research on EE at the ECEC level, particularly in Latin America.

What follows in this introductory chapter outlines the background of the present study. Next, I elaborate on the research problem and gaps, which in turn leads to the introduction of my central research question and its five correlating sub-questions. Finally, I explain the scope of the research and conclude this chapter with the overall structure of the thesis.

1.1. Background of the Study

Multiple ecosystems have been severely degraded as a direct result of human demands; many species have become endangered, and some have gone extinct. The eminent socioenvironmental crisis and the threats posed by climate change have had devastating consequences, not only for non-human species themselves but also for humans, as we depend on healthy ecosystems to support our own lives and livelihoods (WHO, 2012). In this state of affairs, young children will suffer more than older generations from a lack of natural places, water and food shortages, pollution, poverty and injustice, all of which jeopardise children's international rights to survival, development, nutrition, education, and access to health care (United Nations, 1989; UNICEF, 2015). At the same time, children will also be the ones *making* key decisions in the future, and therefore older generations will increasingly depend on the younger ones (Siraj-Blatchford et al., 2017; Wals, 2017). The responsibility to tackle issues of sustainability should therefore be addressed as a shared duty among all generations, now and in the future, and action must be oriented towards working *with* children instead of just working for them (Alderson, 2016).

Recently, the notions of agency, participation, transformation and, most of all, action have been championed as crucial aspects of young children's lives and a

fundamental feature to achieve a more sustainable world. For instance, the Sustainable Development Goals (SDGs) initiative launched by UNESCO in 2015 is evidence of the influence of an education-action-transformation discourse based on the idea of peace and prosperity for people and the planet—both now and in the future. The fourth objective of the SDGs is particularly relevant, as it puts education at the centre and advocates for inclusive and equitable quality education as well as lifelong learning opportunities for all. This goal is based on the notion that education "is the key that will allow many other Sustainable Development Goals (SDGs) to be achieved" (United Nations, n.d.-b).

In 2019, the UN stressed the importance of active participation even further by calling for a "decade of action to deliver the global goals", focusing on three key aspects: global action, local action and people action. The stated underlying objective of this tripart call to action is to "generate an unstoppable movement pushing for the required transformations" (United Nations, n.d.-a). Moreover, the UN General Assembly adopted a new resolution and made a powerful statement that accentuates the importance of transformation at the individual, community and political levels. The resolution stressed that such "transformation necessitates, among other things, a certain level of disruption, with people opting to step outside the safety of the status quo or the 'usual' way of thinking, behaving or living" (UNESCO, 2019, p. 4). Following this path, 2020 was declared to be a "super year of activism" to make progress and achieve the aims proposed by the SDG, which are to be met by 2030 (Lee, 2019). This view embraces a powerful message of education as a transformative process in which critical thinking and children's agency at the individual, collective and political levels are acknowledged as necessary elements of environmentally conscious social change. Regarded from this perspective, one of the main goals of EE is to inspire students to engage actively with their surroundings through enquiry, discovery, critique and participation in decision-making, thus envisaging a broader and more critical EE oriented toward sustainability.

In ECEC, the call to incorporate more critical approaches of EE has been echoed by contemporary scholars (Davis & Elliott, 2014; Elliott & Davis, 2009; Elliott & Young, 2016; Pramling Samuelsson, 2011; Pramling Samuelson & Kaga, 2008; Siraj-Blatchford, 2009). Davis and Elliott (2014), for instance, assert that young children should be recognised as competent agents of change and be actively involved in

discussions, actions and decision-making about sustainability. Furthermore, projects initiated by the World Preschool Organisation (OMEP) in 2008 which include studies about children's voices for sustainable development, education for sustainable development in practice in ECEC or intergenerational dialogues on education for sustainable development (to mention some), have also been key in the promotion of ECEC as the ideal time to teach and practise EE in a broader sense, one in which children are recognised as competent social agents (Engdahl, 2015).

This powerful and rich view of children as social agents, however, is still contentious. One side of the argument holds that children should be shielded from the harsh realities of the world, such as the socioenvironmental crisis, as these might be too complex and obscure for children to deal with (Smith- Sebasto, 2011; Sobel, 1996). Meanwhile, others contend that children have not only the right but also the skills to know and address these realities in an effective and responsible way (Elliott & Davis, 2009; Powell & Somerville, 2018; Taylor, 2013).

The transition towards a contemporary image of children as active citizens and agents of change as well as the view of EE as a critical praxis—at once disruptive and transformative—cannot be expected to consummate itself overnight. The transformation of ideas, attitudes, behaviours and actions necessitates changes at distinct levels, from social structures to individual beliefs. In this sense, the recognition of the dynamics which are presently in place and continue to shape current discourses and practices of and around children, childhood and the environment in ECEC is fundamental to our understanding(s) of how different EE approaches are produced and maintained. Ultimately, it is these discourses which allow us to envisage possible new paths for increasingly critical and broader EE approaches to emerge. To do so, research that goes beyond description and that looks for "the hidden conditions and structures that reproduce unsustainable and inequitable thinking, acting and policies in ECE" is imperative (Ärlemalm-Hagsér & Elliott, 2017, p. 270).

1.2. Research Problem and Gaps

EE in ECEC is a relatively new field of study, and hence the overall paucity of research in this area represents the main knowledge gap into which this project

seeks to insert itself. Another notable gap within the available research is the absence of children as research participants. Lastly, further understanding of the resistance(s) to transition towards broader or critical approaches to EE in both research and practice represents an additional third gap to be considered (Bascopé, Perasso & Reiss; 2019; Davis, 2009; Somerville & Williams, 2015).

Both research on as well as formal commitments regarding EE in ECEC vary greatly from one country to another (UNESCO, 2012). In some parts of the world, interest in research and practice of EE in preschool has increased rapidly; this has been the case, for instance, in Sweden, Australia and the UK (Ärlemalm-Hagsér & Elliott, 2017; Boyd, Hirst & Siraj-Blatchford, 2018; Siraj-Blatchford, Mogharreban, & Park, 2017). However, these examples of good practice and efforts are still not the norm. Overall, EE at the preschool level is still not common in research or in practice, and the number of research publications is low (Ardoin & Bowers, 2020; Bascopé et al., 2019).

The first ever systematic review of the literature was conducted in 2009, and it concluded that there was a "research hole" in the field (Davis, 2009). A more recent review of the same nature revealed that interest in research about EE in ECEC has grown and that the number of publications has increased significantly since 2009 (Somerville & Williams, 2015). Nevertheless, most of these reports have been carried out in western countries and in English.

In Mexico, as in other Latin American countries, EE at the preschool level remains extremely underexplored and there is a general lack of academic research and publications which concentrate specifically on preschool. This is because most research tends to be focused on the primary school level or merely incidentally includes preschool due to the fact that it was recently integrated into the basic education level. For instance, there are insightful studies in Mexico about EE at the basic education level that analyse the social representations of teachers (González-Gaudiano, 2003, 2012; Terrón, 2004; Terrón & González Gaudiano, 2009). In a similar vein, other studies have documented primary school teachers' conceptualisations of EE and their links to practice (Benavides-Lahnstein, 2017). There are also historic accounts of the evolution of EE in the country (Terrón-Amigón, 2004), including an analysis of the national curricula and EE policies

(Barraza, 2001; de Alba & Viesca, 1992; Paredes-Chi & Viga-de Alva, 2018). Simultaneously, other studies centre on theoretical and philosophical reappraisals of the field (González-Gaudiano, 2000, 2003; Leff, 2007).

Most research in the field has focused on teachers, however, parents or primary carers have been seldomly considered even when they also play a central role in the education of their children. Young children depend to a great extent on their primary carers to cover their basic needs, including access to education. Therefore, primary carers have a strong impact on shaping the attitudes, values, beliefs and actions of their children. Children's parents as well as the preschool they go to represent dynamic systems which entail a myriad of interactions among their various members. These interactions can then contribute to either reproducing or changing the roles and norms that are established within the community (Bronfenbrenner & Morris, 2006). If the preschool is viewed as an open community in which various actors interact and influence one another, then it is important to analyse parents' perspectives to better explore and comprehend the discursive dynamics of power and learning that give shape to different ways of understanding and doing EE in ECEC.

Notably, both in Mexico and internationally there has been a tendency to neglect preschool-aged children when it comes to understanding and having a say about the problems that affect life on Earth (Caiman & Lundegård, 2014; Hedefalk, et al., 2015). Children are often seen as objects of study rather than as participants in the same; as a result, most research is conducted *on* or *for* children rather than *with* them (Green, 2015).

In the case of Mexico, it is striking to note that even when most of the studies that address EE focus on the primary school level, children are hardly included as research participants, meaning that the emphasis remains on adults. The few studies that have included primary school-aged children in research concentrate on measuring or assessing children's concepts, knowledge and attitudes (Barraza, 1999; 2001, 2002; Muñoz-Cadena, Estrada-Izquierdo & Morales-Pérez, 2016; Pineda-Jiménez et al., 2018). These studies also reflect the strong influence of positivistic approaches and discourses of developmental psychology, which are used as the rationale to conduct the study with primary school-aged children—but not with

younger children. At present, there are no empirical studies in Mexico that take ECEC as the main research focus and incorporate preschool-aged children in their research.

Another gap in both research and practice is the lack of broader or more critical EE approaches. Overall, research on and practice of EE in ECEC has shown hesitancy in addressing critical perspectives of EE that go beyond bonding with nature and that consider young children to be capable social agents of change (Bascopé, Perasso & Reiss; 2019; Duhn, 2012; Davis, 2009; Elliott & Davis; 2009; Pramling-Samuelsson & Kaga, 2008). This dynamic has been particularly salient when it comes to acknowledging the fact that we are facing a social and environmental crisis that jeopardises life on Earth.

The available reviews of the literature indicate that one of the most prevalent approaches within the international arena is that of education in the environment, followed by education about the environment, while approaches oriented towards the idea of education for the environment are uncommon (Bascopé, Perasso & Reiss, 2019; Elliott & Davis, 2009; Somerville & Williams, 2015).

The education in the environment approach emphasises bonding with nature and invites children to have direct contact with natural elements in order to connect or reconnect them with nature. These approaches have become very popular within some western countries (Adams & Savahl, 2017; Ardoin & Bowers, 2020a; Davis, 2009; Hedefalk et al., 2015; Somerville & Williams, 2015). In Mexico, education in the environment is less common and is often linked to alternative pedagogical models found primarily at private preschools.

When the idea of bonding with nature is further scrutinised, a tendency emerges in which bonding with nature becomes conflated with sustainability (Somerville & Williams, 2015). This, in turn, translates into teachers and researchers assuming that play outdoors and bonding with nature are sufficient to address the issue of sustainability with young children at ECEC level. This belief is directly related to the assumption that ECEC is already doing its part simply by allowing preschool children to spend time in and with nature.

One of the possible reasons such a belief is so ubiquitous is linked to other equally dominant assumptions about childhood and the type of education young children should receive at such an early age (Elliott and Davis, 2009). Some authors argue that the resistance to move towards more critical approaches of EE in ECEC is related to the romantic images of children and nature that have dominated ECEC for decades (Elliott & Davis, 2009; Elliott & Young, 2016; Duhn, 2012; Taylor, 2013). Duhn (2012), for instance, argues that the ideas around the connection to nature and a natural childhood seem to rest on a romantic view of natural childhood that presents children as intrinsically innocent and defenceless. Therefore, topics such as environmental problems or the troubled relationships between humans and the more-than-human seem too disruptive and conceptually beyond the grasp of young children. Thus, the image of the child as good and irrational ends up posing "a formidable challenge for educators when it comes to developing pedagogies and curricula that address contestable issues" (Duhn, 2012, p. 20).

Following from this set of circumstances and the critical analysis of images of childhood (Elliott & Young, 2016; Taylor, 2013), in this thesis I argue that the lack of critical approaches of EE in ECEC that go beyond the idea of (re)connecting children with nature and bonding with it may be linked to the persistence of romantic images of childhood.

Furthermore, I contend that the different EE approaches (i.e., education in, about and for the environment) can be associated with other contemporary images of childhood. Identifying said images and how they inflect different practices may give way to useful critical analyses of hardwired discourses on ECEC that are seldomly questioned. Research on images of childhood and the relevance of reflecting on how these images influence one's conceptions, expectations and actual practices has been addressed by a number of previous studies (Jenks, 2004; Kennedy, 2000; Smith, 2012, 2014; Malaguzzi, 1993, 1994; Moss, 2010; Sorin, 2005; Woodrow, 1999). However, research that specifically considers how images of childhood influence EE in ECEC is a much less explored area, this thesis therefore seeks to empirically explore this aspect.

1.3. Research Questions

The main research question guiding this study is:

How do images of childhood and associated pedagogical models impact the ways in which EE is understood and practised in Mexican preschools?

The inquiry involves the following five sub-questions:

1) How is EE tackled in two Mexican preschools with contrasting pedagogical models?
2) How do teachers understand the terms 'environment', 'EE' and 'sustainability'?
3) How do children navigate ideas regarding the environment, EE and environmental problems?
4) How do parents understand the terms 'environment', 'EE' and 'sustainability'?
5) What are the dominant images of childhood that teachers and parents hold?

These five sub-questions serve to gather information that is necessary to answer the main question. Each sub-question addresses different components that are interrelated at different levels which I explain in more detail in chapter 4 when I present the methodology of the study.

1.4. Scope of the Research

My thesis stems from the argument that particular images of childhood along with dominant views of the environment have created discourses that have the potential to either promote or prevent the incorporation of more critical approaches to EE in ECEC that acknowledge children as social agents in the here and now. This study draws on poststructural research paradigms, discourse analysis and the sociology of childhood to critically examine EE at the preschool level in Mexico. The conceptual foundation of this thesis is comprised of three central pillars: EE approaches, images of childhood and pedagogical models. Figure 1 shows the research paradigm and key theories that frame this study in the outside ring, while the three conceptual foundations are in the middle ring and the main research topic is at the centre.
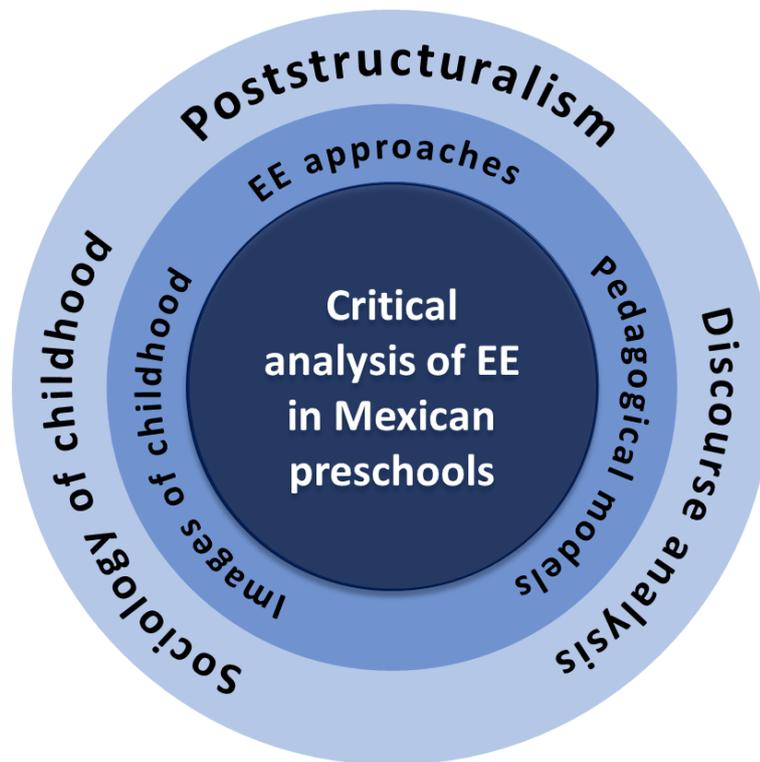
Figure 1. Paradigm, key theories, conceptual foundations and research topic.

In this thesis I use the term 'EE approaches' (Tilbury, 1995) to acknowledge the many Environmental Education*s* (plural) that exist: from narrow approaches, centred on knowledge about the natural environment or merely spending time in nature, to broader ones focusing on education for the environment and the intersection of different dimensions of life (Novo, 1996). I refer to critical EE approaches to convey the views that show an interest in "bringing multiple groups in society together around wicked sustainability issues" (Stevenson et al., 2017, p. 5) and which acknowledge the relevance of both children and adults as competent social agents (Pramling-Samuelson & Kaga, 2008).

Images of childhood are understood here as representations of children, which affect and partially construct what children are (Prout, 2005). These images are created by various paradigms, theories and ideologies and, at the same time, they generate and reproduce philosophical, political, economic and scientific discourses (Woodhead, 2006). Images of childhood serve as social icons, reflecting assumptions, expectations and understandings of what a child is supposed to be (Kennedy, 2000).

Pedagogical models refer to the formal framework or guidelines that structure—through theories, principles and expected practices—the work of teachers in an educational context, in this case at the preschool level. Pedagogical models implicitly or explicitly reproduce and produce images of childhood and, therefore, are included as an essential component of my research. The analysis of pedagogical models seeks to examine how images of the child associated to particular pedagogical models influence the ways in which EE is understood and practised. In that sense, the purpose is not to compare pedagogical models or asses their effectiveness, but rather to identify how certain pedagogies reproduce dominant images of childhood that could hinder or favour more critical views of EE in ECEC.

A core premise in this study is that images of childhood govern not only what we think about children but also how we interact with them (Alderson, 2016; Prout, 2005). In turn, the images of childhood we hold, whether explicitly or implicitly, play a critical role in how ECEC is understood and practised (Malaguzzi, 1994; Rinaldi, 2006; Taylor, 2013; Sorin, 2005). As a result, in this thesis I contend that these images impact how EE is enacted to a significant degree (Duhn, 2012; Elliott & Young, 2016).

The analysis of images of childhood that forms the basis of this thesis responds to the call for research that examines the underlying mechanisms that shape and maintain dominant practices in the field in order to scrutinise them and give room for critical debates and alternative discourses in ECEC that can eventually become an impetus for change. I have chosen to work with the concept of images of childhood because it is useful in the contestation of many often taken-for-granted beliefs about children and childhood as well as to acknowledge that conceptions of children and childhood are socially, culturally, politically and historically constructed—and not merely a biological set stage of human development. Using the term images of childhood signifies that I recognise that childhood is a socially constructed category that is not universal or static, but one that is constantly changing (Jenks, 2005; James, 2010; Kennedy, 2000; Smith, K., 2012; Sorin, 2005; Rinaldi, 2006).

I have selected poststructuralism as a research paradigm that guides the conceptual and theoretical framework of this thesis because different from dominant positivistic paradigms, poststructuralism centres on examining the ways knowledge and

meaning are constituted, rather than on finding statistical trends or absolute facts or generalisable truths. Importantly, from a poststructuralist position the analysis of discourses looks, not only at written and spoken messages, but also at actual social practices (Baxter, 2016; Weedon, 1987).

By adopting a poststructuralist framework, I move away from the idea of measuring correct or incorrect responses or assessing participants in controlled scenarios, instead, I focus on critically examining the dynamics of power, language and subjectivity that give rise to discourses about childhood and EE in ECEC in a particular social and cultural context. Poststructuralism provides relevant theoretical and methodological tools that allow me to see with a critical eye the taken for granted assumptions of children, development, education and the environment which are fundamental to identify how images of childhood are produced, reproduced or contested and how these impact on the way EE is understood and practised.

By taking a poststructuralist stance I therefore accept that my ways of knowing the world are the result of interactions between knowledge/meaning, power, and identity (Hughes, 2001) and that meaning, and knowledge are not absolute, nor purely objective or neutral. Knowledge is a political entity and is always allocated within historical and cultural contexts, therefore meaning is something that is produced by subjects rather than objectively discovered (Baxter, 2003; Foucault; 1972,1980,1982; Weedon, 1987). The construction of knowledge and what counts as true is thus inevitably tied to a certain degree of subjectivity and interpretation (Mc Naughton, 2005; Weedon, 1987) and therefore "knowledge can never be free from ideology, because all knowledge is biased, incomplete and linked to the interests of specific groups of people" (Mc Naughton, 2005, p. 22). From here I content that, pure reason, objectivity or human nature are not necessarily more legitimate or neutral truths, as these notions emerged also from discourses with premises that entailed preestablished positions of power, hence, privileging one way of knowing (objectivity) over the other.

Although different strands of poststructuralism exist, I align with feminist poststructuralist ideas, particularly, the work of Weedon (1987) because of the emphasis that this theory places on discursive practices, power relationships, subjectivity and the possibility of change. In this thesis I apply the principles of

feminist poststructuralism to identify and analyse how discursive practices are structured as well as, "what power relations they produce and reproduce, where there are resistances and where we might look for weak points more open to challenge and transformation" (Weedon, 1987, p.136). Hence, informed by the endeavour of feminist poststructuralist studies the objective of this research is to understand how particular ways of knowing, doing and experiencing EE in ECEC are constructed, reproduced and resisted (Weedon, 1987).

Using poststructuralism and the sociology of childhood as theoretical lenses, this research advances knowledge on the complex ways in which images of childhood shape EE discourses and practices in Mexican preschools. Through critical analyses, this thesis challenges dominant developmental and romantic conceptualisations of childhood, scrutinises the idea that EE in ECEC should centre merely on reconnecting children with nature or simply learning about nature and unveils the ways in which the so-called alternative and child-centred pedagogies reproduce reductionist, prescriptive and naïve views of EE in ECEC. Such analyses provide a resource for reflection that challenges commonly held beliefs about childhood, education, nature and the environment.

It is important to emphasize that this is not a comparative study, nor does it seek to generalise its findings to a broader population beyond Mexican preschools. To the contrary, the goal is to examine the diversity of meanings and the possible commonalities, absences and challenges inherent to the myriad approaches and practices of EE in preschools that have chosen to engage with the same, albeit in their own unique ways, which are themselves, nonetheless, inescapably informed by different pedagogical models and views of childhood.

Keeping in mind that all knowledge is fallible, it is not the purpose of this thesis to provide factual findings or readymade strategies for implementing more critical EE approaches, nor do I claim that one pedagogical model or approach is necessarily better than another. Instead, my research highlights the relevance of including the examination of images of childhood in the study of EE in ECEC. Moreover, it stresses that analysing childhood from social and discursive positions allows for an uncovering of the mechanisms that underlie people's understandings and lived experiences of education, care, childhood and the environment, each of which are

essential in the construction of discourses and practices around EE. Such analyses may serve to bring attention to—and indeed spark debates about—the frequently unacknowledged discursive truths which represent the conceptual foundations of EE in ECEC.

Finally, it is important to note that the focus of this study is EE in ECEC, yet it links to multiple perspectives and disciplines, such as childhood studies, alternative pedagogies, environmental sociology, sustainability, psychology, history and culture. Even though the thesis is positioned within the field of ECEC, I use the term 'preschool' to refer to the formal education that children in Mexico receive from three years of age until they move to primary school (usually when they are six or seven years old). Nevertheless, I also refer to ECEC to encompass the broader field of study. Likewise, I use the term EE instead of Education for Sustainable Development (ESD) or Education for Sustainability (EfS), as the chosen term is the most commonly used in Mexico.

1.5. Structure of the Thesis

The thesis is organised into 10 chapters. Chapter one was the introduction to the study, and it provided the rationale and clarified the scope of this research. Chapter two continues with a more detailed explanation of the theoretical and conceptual foundations of this study. I start by presenting the notion of EE approaches and follow with an explanation of four key concepts drawn from poststructuralist theory: discourse and power, alternative discourses, and governmentality. I then explain the notions of images of childhood; next, I move to connect this concept with EE approaches in ECEC and lastly, I give an overview of the Waldorf and Reggio Emilia pedagogies.

Chapter three is about the Mexican context, and it contains basic geographical, demographical and economic information about the context, including an outline of the main socio-environmental problems in the state of Quintana Roo, with a closer look at Playa del Carmen, the city where this study was conducted. This chapter also explicates the Mexican education system, focusing on the preschool level, its regulations and the types of services and provisions. It continues with an overview of

EE in Mexico, followed by a historical examination of EE in the preschool curricula in the country.

In chapter four I present the methodology of the study and restate the aims and research questions. Here I include a section on doing research with children and explain the qualitative research design and the case study strategy used.

Chapter five is the first of the four findings' chapters. It explores how EE is tackled in each preschool and how the notions of environment, EE and sustainability are understood. Chapter six explores the findings related to how children navigate ideas regarding the environment, EE and environmental problems. Chapter 7 concentrates on parents and explores how they understand the terms environment, EE and sustainability. Chapter 8 is the final findings chapter, and it presents the dominant images found in each preschool and how these relate to the pedagogy and EE understandings and practises by examining teachers and parents' beliefs and assumptions about who children are, what and how they think they should learn and why.

Chapter 9 is the main discussion of this thesis, where I critically analyse how the identified images of childhood produce and reproduce discourses about children that could hinder or facilitate the transition towards more critical approaches to EE at the preschool level.

Chapter 10 is the conclusion chapter, where I restate the main arguments and key findings of the thesis, address the contribution to the field, and give some recommendations for future research.

2. Theoretical and Conceptual Framework

This chapter addresses the theoretical and conceptual underpinnings of the present study in order to explain and clarify how the different theories and key concepts are used to construct and support the core arguments and further analysis of this thesis.

The chapter is organised in seven sections: the first section explains the notion of EE approaches and the tripartite model of education in, about and for the environment, along with the idea of narrow and broad EE approaches. Section 2.2 explains discourse and power as concepts that are interrelated. Section 2.3 continues with an explanation of dominant and alternative discourses and section 2.4 focuses on the notion of governmentality. In section 2.5 I move to explain the concept of images of childhood, and I introduce three broad dominant models of childhood (Dionysian, Apollonian and Athenian). In section 2.6. I bring together three specific images of childhood in relation to EE approaches in ECEC: the innocent child and education in the environment, the child as becoming and education about the environment and the child as a social agent with education in the environment. Finally, in section 2.7 I introduce the two pedagogical models that guide the education principles and practices at the two preschools where this study was conducted. These are Waldorf (or Steiner education) and Reggio Emilia.

2.1. EE Approaches

EE is a term that has changed and evolved over time and there is no single standard definition of the same. EE might be used for a variety of purposes and may encompass a wide range of teaching methods, topics, audiences and educators (Monroe et al., 2008). In that sense, the meanings of EE, the field to which it belongs, what it encompasses and how it is practised are neither absolute nor static. To account for the diversity of meanings and approaches that exist—in referring to the idea of environmental approaches (Tilbury, 1995)—and to distinguish between different EE approaches, I use the typology initially developed by Lucas (1972), who coined the terms education *about* the environment, education *in* the environment and education *for* the environment.

Indeed, there are other more elaborated EE typologies, for example Sauvé's (1996, 2015) classification based on the idea of EE currents. Nonetheless, I chose Lucas' categorization (education, about, in and for) because it looks at the three dominant approaches in more general terms, thus allowing me to conceptualise EE approaches in terms of a continuum, ranging from narrower to broader. Furthermore, this tripartite model has already been widely used by several EE scholars (Lucas; 1972; Palmer, 1998; Robottom & Heart,1993; Tilbury, 1995), including within the field of EE in ECEC (Davis, 2009; Hedefalk et al., 2015; Lee, 2001; Lee & Ma, 2006), thus making it a useful common referent. I do, however, welcome Sauvé's (1996, 2015) notion of EE currents that overlap and are not static; likewise, I take as a reference the parameters she applied to classify one current from the other.

I introduce the idea of narrower and broader approaches to differentiate the scope deployed by each of these distinct types of EE. This differentiation considers the diverse ways in which EE is understood and practised, an approach's assumed aim or purpose, its view of the environment, what is highlighted, its guiding principles, the most common educational models followed as well as the preferred teaching and learning methods. In the classification that I present here, narrower EE approaches correspond to initial configurations of EE, while broader approaches tend to reflect more contemporary views (Benavides-Lahnstein, 2017). Table 1 summarises the main characteristics of the three approaches:

Narrow EE ➞ Broad EE			
Approach	**Education about**	**Education in or from**	**Education for**
Overall aim	Gain knowledge about natural phenomena, environmental issues and the relationship of humans and nature	Bonding with nature and learning from direct contact with it	Developing values, attitudes, critical thinking, reflexivity and action to care and protect the environment
View of the environment	As nature, external to the social world, an object to be studied	As nature, external to the social world, yet a source of wisdom and wellbeing	As a totality, including natural, built, technological and social aspects
Emphasis on	Rational and scientific knowledge	Sensorial experience and aesthetic aspects of the environment	Ethical dimension, problem solving and transformational practices
Underlying educational paradigms	Behavioral and cognitive	Experiential and constructivist	Social constructivist, pragmatic, critical
Common teaching & learning methods	Transmissive, memorisation and experimentation	Experiential, sensorial, outdoor exploration and free play	Inquiry based, participation and action oriented

Table 1. EE approaches: Education about, in and for

The idea of presenting these three approaches as going from narrow to broad is that different ways of understanding and practicing EE can be located along the way. For example, there might be ways of viewing EE that can fall within the education in the environment approach and show a broader and critical view than others that are also considered as education in the environment. Therefore, education about, in and for should be seen as general approaches or perspectives instead of specific models with explicit methods that always occur in the same way. This tripartite model is useful to differentiate diverse approaches or ways of doing and understanding EE that display a particular focus or aim yet can sometimes overlap. Next, I provide a brief explanation of each of the EE approaches afore mentioned.

Education about the environment shows an understanding of the environment as a synonym of nature, i.e., as the natural world that "exist[s] independently of people" (Gough, 2008, p.90), thus focusing only on aspects such as natural elements, flora, fauna or biodiversity. Nature is also often seen as an object of study. Furthermore,

there is a simplistic notion of education merely as instruction, where students are expected to reproduce the content offered to them. This approach therefore maintains a passive view of students because the emphasis is only on academic aspects of the environment and the reproducibility of knowledge (Fien, 1993; Robottom & Hart, 1993). The ethos of education about the environment is greatly influenced by positivistic paradigms that prioritise scientific and academic knowledge over experiential or social learning. From this way of understanding EE, it follows that learning facts about the environment will, in the future, promote pro-environmental attitudes (Davis, 2009; Green, 2015; Hedefalk et al., 2015; Somerville & Williams, 2015). Still, knowing or remembering specific information about natural phenomena and humans' damage to the environment might create awareness but not necessarily result in action aimed at living in more sustainable ways (Hedefalk et al., 2015). This is considered a narrower approach because its aim is often limited to learning facts about the natural world.

Different from education about the environment, education in the environment is not so acutely concerned with academic achievement. Instead, it presents nature as a source of wellness and wisdom from which people can learn by using different senses—though not necessarily that of reason. Consequently, aspects such as appreciating nature and interacting with it become the priority. Likewise, the teaching and learning strategies characteristic of this approach become more child-centred and hands-on (Lucas, 1972; Tilbury,1995). Education in the environment approaches are also known for encouraging children's return to natural spaces by positioning nature as an essential component of humans' healthy development and wellbeing (Chawla, 1998, 2002, 2007). These ideas have contributed to reclaiming the importance and the benefits of spending time outdoors for overall wellbeing, including mental and physical health, as well as the development of motor and cognitive skills among children (Chawla, 2020). Despite all of this, I continue to consider education in the environment to be a somewhat narrow approach because EE is still limited to experiencing and connecting with nature. I contend that *only* looking at children in relation to the natural environment is insufficient because it loses sight of larger problems of sustainability and global concerns (Somerville & Williams, 2015). Moreover, this approach fails to recognise and reconcile the relevance of both knowledge and experience for EE.

In contrast to education about and in the environment, I locate education for the environment as a broader and more critical approach to EE. As such, it aims to develop knowledge, skills, abilities and values that are oriented towards critical thinking and ultimately seek to instil action and transformation in the hopes of attaining a more sustainable world. Education for the environment is a comprehensive approach that emerged from the need to resolve the limitations posed by the two approaches discussed above. It places particular emphasis on the role that structures and power relationships have in shaping childhood and education, while still acknowledging the importance that environmental knowledge, experience, values and feelings have for this purpose (Robottom, 2005).

Education for the environment reaffirms the interconnectedness of the environmental, social and economic dimensions of life, all of which are key to move towards more sustainable lifestyles. This approach is reformative and thus in tune with the general principles of both social reformation and socio-critical theories. Education for the environment recognises the relevance of knowledge and experience yet its aim goes beyond learning about nature or experiencing nature. Education for the environment encourages the analysis of complex issues that have a moral and political dimension, such as the conflicting interests of humans versus other humans or of human versus animals. Importantly, it challenges dominant educational models based on instruction, and it sees learners as capable and competent of doing so (Fien,1993; Hart, 2008).

Having expounded these three dominant EE approaches, in the next section I move to explain the paradigmatic and conceptual foundations of this thesis.

2.2. Discourse and Power

The idea of discourses is key in this thesis as this permit for a systematic examination of the ways in which certain approaches of EE have prevailed and to understand the resistance that has hindered the transition toward other more critical ways of understanding and doing EE in ECEC. The notion of discourse is used here to analyse both EE approaches and images of childhood.

Analysing EE as a discursive arena in ECEC from a poststructuralist stance allows one to focus in the principal discourses which have shaped the field of EE in

Mexican preschools, how such EE discourses have been constituted, reproduced or rejected as well as how they have and continue to impact the practice and possibilities of change looking forward to the future. This is because a discursive exploration places its attention on "what gives that discourse its status, its legitimacy, its function, its currency; and what exactly derives, organises, institutionalises, transforms, ignores or promotes it" (Teymur, 1982, p. 162).

In general terms discourses are understood as "set[s] of claims about how the world should and might be" (Bowe, Ball & Gold, 1992, p. 13). From a poststructuralist point of view, language as discourse not only reproduces but also produces power structures. In that sense, discourses are on the one hand a "group of statements that belong to a single system of formation" (Smith, 2012, p. 107), and on the other they are also "practises that systematically form the objects about which they speak" (Foucault, 1972, p.49). This implies that discourses are not restricted to formal written or spoken language alone, as they also materialize through other forms of expression and actions. Discourses exist in dialogue and text, but also in daily practises, artefacts and institutions (Baxter, 2016; Weedon, 1987).

The way discourses of the environment, the environmental crisis, EE and the idea of childhood have changed over time and from one culture to the other reflect the influence of specific 'regimes of truth'. Foucault (1976) speaks of 'regimes of truth' to explain how meanings and knowledge are constructed and then legitimised through a complex system of language and power. For instance, childhood has been explained through different fields of study and ideologies over time, from religious beliefs to developmental psychology. In turn, each of these has contributed to the adoption and maintenance of different postures and power positions in regards to the best way of educating or rearing children. In that vein, a regime of truth is a term that seeks to re-conceptualise truth as political—and not merely as the product of supposedly objective scientific results. Truth itself is, therefore, also constructed through discourses, and, in this sense, it is possible to speak of discursive truths (Osgood, 2006).

The dynamics of power and differing power positions of individuals and groups within a society play a crucial role in how knowledge and discursive truths are constituted. Certain individuals or groups of individuals are in a considerably more advantageous

position than others to affect the pool of knowledge. In this regard, Foucault (1972) explains that there is a 'will to truth' which serves as a system of exclusion in the production of discourse. This will to truth is also dependent on institutional support, as it is bolstered and complemented by well-established fields of study and their corresponding practises, such as pedagogy, psychology and medicine. In this sense, discourses—emanating from their distinct positions of power—define what may be said, what may not be said and what is regarded as true or false. Knowledge, truth and power are therefore all highly interconnected: "[T]ruth isn't outside power, or deprived of power" (Foucault, 1977, p.13). But rather, truth is actually a product of power. Likewise, knowledge is at once a product and a producer of regimes of truth and power structures, which shape societies, subjects and subjectivities through myriad discourses (Weedon, 1987).

In terms of environmental discourses, in this thesis I draw from the argument that "the environment as it exists in the public policy sphere is the product of discourse about nature" (Hannigan, 2006, p.36). On the one hand, scientific disciplines such as biology and ecology have been dominant in the field of EE and have contributed to spreading the view of the environment and EE as an arena that belongs to a scientific subject and that deals with the natural world, placing the natural sciences as exact or hard sciences. On the other hand, books, popular culture and social media have been influential in shaping discourses of the environment as wild nature, which has contributed to the nature/culture divide (Christensen et al., 2018; Hannigan, 2006; Taylor, 2013).

Within ECEC, discourses of the environment also commonly reproduce the narrative of environment as nature; such understandings seem to be rooted in the "historical, and at times deeply romanticised entanglement between childhood and nature" (Duhn, Malone & Tesar, 2017, p. 1363). These emerged not necessarily from scientific disciplines but from the thinking and writings of influential figures of the XVIII century, such as Rousseau (Taylor, 2013). In the section to follow I first focus on the idea of dominant discourses and introduce the notion of dominant and alternative discourses.

2.3. Dominant and Alternative Discourses

I use the term dominant discourses to refer to hegemonic and well-established discourses that outline what is expected, appropriate and the type of behaviours and modes of acting and feeling that belong to a given construction of what counts as normal (Gee, 2014). In other words, dominant discourses enforce a certain social order, which is then expressed and reproduced through the ways in which we think, speak and act about and around others, ourselves and/or certain topics—all in a somewhat predictable and even expected manner.

One effect of dominant discourses is that their respective knowledge and meanings appear as truths that become the norm and are taken as points of reference to construct further sets of premises, which themselves shape people's narratives and actions. These dominant discourses act as a regulatory gaze which defines and prescribes what is or ought to be—as well as what is viewed as normal or abnormal (Foucault, 1997). The way people position themselves in relation to particular discourses "reflects the socially sanctioned dominance of certain ideologies and subjugation of others" (Sinclair,1996, p.132). To exemplify:

> Because discourses vary in their authority, at one particular time one discourse, such as managerialism or market approach, seems 'natural' while another struggles to find expression in the way experience is described.

Following Weedon (1987), I contend that while the power of dominant discourses can make people agree with and defend the validity of the status quo, even when this is oppressive or unjust for others (or even for themselves), at the same time people can also start questioning the practices promoted by the dominant discourse or even challenge their foundations, principles and motives. This means that, although dominant discourses shape subjects and subjectivities, people are also social agents that have the possibility to resist such discourses (Weedon, 1987). Thus, dominant discourses can be resisted and reversed by creating alternative discourses or practices, yet this is neither a straightforward process nor a mere issue of autonomy or freewill. Weedon (1987) argues, however, that the "resistance to the dominant at the level of the individual subject is the first stage in the production of alternative knowledge" (p.111).

Recognising this possibility for subjects to resist dominant discourses implies that EE approaches and pedagogical models in ECEC can be viewed as providing a variety of different representations from which actions may be chosen (Adams, 2011). In this sense, I see children as social agents who are immersed in a dominant culture and space that has been mainly created by adults for them—but which, nonetheless, they can challenge, resist and, at some point, even transform.

Alternative discourses, agency and resistance cannot be separated from the power relationships in which they emerge. Thus, challenging dominant discourses and the status quo is not necessarily a battle against power but a way of realising that dominant and hegemonic discourses can be contested, and that power is not always negative and oppressive. Power also allows the subject the possibility to resist and, indeed, to be in other imaginable ways (Foucault, 1977; Weedon, 1987). Power is therefore a force that is exercised rather than merely possessed, which means that it is always circulating (Lilja & Vinthagen, 2014). As individuals we can exercise our power through agency, but our power and actions are always shaped (i.e., restricted or encouraged) by regimes of truth, by social structures and by other actors who also exercise a certain kind of power (Weedon, 1987). Power, like truth, can be endorsed or disputed. The ways of exercising power at both the individual and structural levels are considerably diverse. For Foucault, power is productive and works from the 'ground up', which contests the notion of power as a force that is always imposed by the ruling class upon the masses from above. It is relevant at this point to recognise children as potential social agents who can contest dominant discourses about themselves or about how the world functions. Similarly, teachers can construct "new boundaries" and alternative discourses to challenge assumptions about education and children, rather than passively accepting (and reproducing) them (Dahlberg, Moss, & Pence, 1999, p. 34).

Given that dominant discourses about childhood and education are embedded in historical traditions, culture, values as well as economic and political interests, the resistance manifested against moves toward different ways of understanding them is somewhat expected, but nonetheless worth the trouble. This sentiment is reiterated by Weedon (1987): "[I]n order to have a social effect, a discourse must at least be in circulation" (p. 110). The importance of emerging alternative discourses is thus that they open the door to new understandings and ways of being by allowing new ideas

to start circulating, bifurcating and, ultimately, making room for new ways of being and doing.

Emerging or alternative discourses offer the possibility of change (Weedon, 1987), which is fundamental in order to transition toward more critical and just ways of doing EE in ECEC. A variety of discourses already exist in both EE and ECEC, including some which either contradict and/or compete with each other. These are employed to make sense of children, education, the environment, sustainability and institutions. Transforming the way(s) in which EE in ECEC is viewed and practised requires a critical examination and challenging of the dominant or taken-for-granted ideas about childhood, education and the environment.

The way peripheral discourses can expand their social power is itself governed by the milieu of the cultural and social interests and power within which the disputes to the dominant discourse are made (Foucault, 1982; Weedon, 1987). Thus, subjects and discourses themselves are never free from ideologies. As Baxter (2003) explains, there is no "knowledge that can be separated from the structures, conventions and conceptuality of language as inscribed within discourses" (p. 6). Yet, discourses can and should be disputed.

For my research, the concept of dominant versus emergent discourses is fundamental not only as a theoretical basis but also as a rationale to listen to and incorporate both children and adults in my study. I argue that the analysis of EE in ECEC is also a way to challenge certain taken-for-granted, well-established ideas about childhood—particularly, ideas around childhood and nature as well as what is natural, normal and good. In this sense, I welcome the critical perspective(s) of authors like Taylor (2013) and Duhn (2006, 2012), who seek to challenge, problematise and reconfigure the normalised *nature of childhood*.

A final point to consider when contemplating dominant and alternative discourses is that while it might be true that power dynamics are complex and constantly changing, they generally tend to remain uneven and are seldom (entirely) democratic (Hannigan, 2006). The imbalance of power relationships can lead to states of domination and subordination that are not always evident, and therefore these must be, first, identified and then subsequently scrutinised.

2.4. Governmentality

The notion of governmentality is paramount in my understanding(s) and argument of images of childhood as mechanisms that mould the ways in which children are treated and/or managed. Moreover, this same concept plays an important role in the ways in which children are instilled with certain ideas and ideologies or restricted from participating in certain activities, in this case, EE. Governmentality, from a poststructuralist point of view, refers to "the way in which the conduct of individuals or of groups might be directed", encompassing "forms of political or economic subjection, but also modes of action…destined to act upon the possibilities of action of other people" (Foucault, 1982, p. 221). The idea of governmentality represents a liberal approach to exercising power, which instead of trying to limit human agency actually seeks to shape it (Foucault, 2007). In that sense, the focus of governmentality is to administer people's lives and subjectivities alike (Dean, 1999).

The concept of governmentality stresses that power can shape both external social structures, such as institutions, as well as individual internal structures, that is, subjectivities (Duhn, 2006). Hence, diverse modes of control can be produced and reproduced not only through institutions, culture, economic models, science and religion but also through individuals; such mechanisms of control can be aimed at governing bodies, thoughts, actions and, importantly, even the self (Weedon, 1987).

Distinct modes of governing others have had different forms with significant variations over time. Foucault (1977) argued that the modern subject is produced by power relations that manage, train, supervise, reform, educate and correct the individual using various subtle and sophisticated technologies and techniques. This means that power relations produce the child as a subject through, for instance, given technologies, such as ECEC and pedagogical models where assessments, developmental milestones and learning outcomes act as techniques that monitor children, designating which are 'normal' and which 'abnormal'.

A fundamental premise when talking about governmentality is that, distinct from coercive modes of control, it operates with and through freedom. In modern liberal regimes, freedom is itself a mechanism to govern the conduct of others and one's own conduct (Rose, 1999). The idea of self-regulation and self-responsibility becomes the hallmark of neoliberal and advanced liberal orders. By putting the

responsibility for either failure or success on the individual instead of society or the state, neoliberal and advanced liberal regimes create the need for "reflexive, adaptable, 'enterprising' subjects capable of actively working on themselves" (Smith, 2012, p. 32).

Duhn (2006) adds that the relationship between adult and child is necessarily political and that childhood, as an institution, has enabled the definition and governance of both adulthood and childhood, producing a particular view of childhood that is indispensable to the modern idea of adulthood:

> The well-adjusted adult is everything that the child is not (yet) – responsible, independent, self-governing. In late modernity, the adult is a political entity in itself, a mirror image of the larger political totality. The adult as self-governing subject exists in contrast to the child as the not-yet stable, not-yet-capable-of-self-governing 'subject in the making'. The subjectivity of the powerful adult is constantly re-generated against the subjectivity of the dependent, irresponsible and fickle child. The child, incapable of self-governance, is governed by its inability to govern itself. In this web of power relations, the adult is produced as both capable of self-governance and of governing the child. (p. 25)

The interrelation that exists between the child and the adult is marked by a struggle for power that places the adult in a privileged position that rationalises and justifies the exercise of power over children. Yet, these ways of governing the child are not all the same everywhere; they differ depending on the context and the regimes of truth that a society or a group of people pursue at a given time.

One of the key principles of the notion of governmentality posits that understanding the people whose conduct is to be governed and their potential reactions to the modes of guidance or control is necessary to govern the actions of others (Smith, 2014). Hence, if one thinks of children as innocent and good, the strategies employed to educate them and direct their actions are different from the those used if the children are seen as knowledgeable and competent social beings.

Having presented these key concepts drawn from poststructuralism, I now move to introduce the general notion of images of childhood and then map several specific

images of childhood. By bringing together this specific notion with distinct approaches to EE, in this thesis I provide a critical and contextual examination that identifies how the power dynamics involved in the diverse ways of depicting and governing childhood at once impact the way EE is enacted in Mexican preschools.

2.5. Images of Childhood

The term 'images of childhood' was developed by sociology of childhood scholars, and it alludes to the different ideas or discourses that have governed childhood (James, 2010; James, Prout & Jenks, 1998; Jenks, 2004; Kennedy, 2000; Smith, 2012; Sorin, 2005). In this thesis, I contend that the concept of Images of childhood is fundamental to further understand how childhood creates and is created by technologies and techniques that shape the ways in which EE is enacted in Mexican preschools. The argument that forms the basis of my thesis revolves around the idea of childhood as a domain, i.e., as a field that can also be explained via discourses (Duhn, 2006; Jenks, 2005; Smith, 2012).

It is important to mention that in Mexico, the sociology of childhood and ECEC are still disconnected fields of study. Neither sociological nor political perspectives are viewed as something that educators should be concerned with. Moreover, the study of childhood as a domain, including the history of childhood, is itself still a new arena (Castillo-Troncoso, 2003; Herrera-Feria, 2007). At the preschool level, much of what is taught about the child and childhood is still based on a concept in which childhood is perceived of as a predefined stage of human development, tightly framed and limited by the idea of academic outcomes and developmentally appropriate practices. By using the notion of images of childhood and taking a poststructural stance, I am inevitably and overtly challenging the taken-for-granted idea of the 'natural' child and the developmentally driven assumption of childhood as a set of universal stages of human growth.

From the perspective of the sociology of childhood which has informed my research, childhood is not merely a fixed and natural stage of human development but rather a category that has been shaped in various ways by history cultures, and contexts (Mayall, 2000). Therefore, it is possible to speak of a "multiplicity of childhoods"

(James, 2010, p. 487) rather than a single, invariable experiential entity. This concept allows for the study of childhood to shift from one of universality and homogeneity to that of diverse and socially constructed discourses. In this sense, the study of childhood is not solely concerned with biological or cognitive development; rather, it emphasises a critical analysis of children in their social, cultural and political world(s), including the ways in which they relate to other people, the places in which they grow up, the activities they engage in and their varying "culturally localised competencies and identities" in constant development (Woodhead, 2006, p. 21).

I want to make it clear that by employing the concept of images of childhood in this dissertation, I do not contend that children and childhoods are merely discursive constructs, but rather that childhood is comprised of "heterogeneous elements of culture and nature" (Prout, 2005, p. 44). In that sense, I reject the idea that childhood is either "purely natural" or "purely cultural" (Taylor, 2013, p.xix).

Informed by poststructuralist theories and the sociology of childhood, I argue that there are diverse images of childhood that act as generative mechanisms as well as technologies of the self-aimed at producing subjectivities (Blom & Morén, 2011; Foucault, 1988). This means that images of childhood as dominant discourses have the power to produce and reproduce discursive truths that instil particular ways of being. Therefore, discourses not only define who and how children should be and how to be around children, but they also shape practices, theories and institutions that eventually also shape the lives of children and adults in a given society.

In other words, images of childhood create statements about what childhood is, which impacts the ways people interact with children by forming and cementing practices that shape what children learn, what they are allowed to do, and when they are allowed to do it—all of which ultimately serves to govern the lives of both children and adults alike. Yet, alluding to the notion that children are neither purely natural nor consummately social as well as recalling the properties of alternative discourses and power, I contend that children and adults exist as embodied and social agents. As such, they have the power to, not only reproduce, but also contest and generate the very discourses which work to shape them.

Many dominant images of childhood have been configured over time, and these correspond to different economic and political agendas which are embedded in particular ideologies and doctrines (Jenks, 2005). Dominant images of childhood can also be seen as paradigms of childhood that define what a child is and why (Williams & Rogers, 2016). In this thesis, I take three broad paradigmatic models of childhood to set the ground for the further analysis of more specific images of childhood. These are the Dionysian and the Apollonian child, which are two well-known contrasting ways of understanding childhood as either evil or innocent (Jenks, 2005), as well as a third model referred to as the Athenian child, which is a more contemporary discourse of childhood that highlights the notion of child agency (Smith, 2012, 2014).

What these three broad representations of childhood have in common is that they place special attention to the way governmentality (i.e. ways of governing children) moulds children in both discourse and practice. Hence, aspects such as how power, through ideologies and other dominant discourses, predetermines the conduct of children is seen as a core component in understanding why children are viewed and treated as they are. An understanding of the broad models of childhood is necessary to set the scene for the further mapping of more specific images of childhood with EE approaches in ECEC, which is one of the objectives in this thesis. I, therefore, start by briefly introducing the Dionysian child and follow with the explanation of the Apollonian child, eventually concluding with an exploration of the Athenian child and the links to ideas on agency.

2.5.1. The Dionysian and the Apollonian Child

The Dionysian and the Apollonian child are better understood as dualistic images. In general terms, the Dionysian child is a product of the so called old European order and reflects the idea of children as evil, wild and sensual souls that need to be controlled and contended with via external measures. Most of the imaginary that gives shape to the Dionysian child is influenced by Christian religious doctrines and is related to the belief that children are born sinful, as they embody the original sin. Examples of external controls employed to restore children's innocence and goodness include not only baptism but also disciplinary methods, such as force and physical punishment, which traditionally characterised regimes of absolute power

and were seen as necessary measures for ensuring obedience. Such practices echoed the centralisation of political control in the patriarchy, which was likewise mirrored in patriarchal family models (Jenks, 2005).

Importantly, the child under the Dionysian model is seen as a little adult. This image of the child as incomplete and bad carries the dualism of the rational adult versus the irrational child. In this discourse, the figure of the white male occupies the power position and is seen as entitled to discipline the irrational creatures (i.e. children) in order to ensure that they become normal(ised) adults. These assumptions place the child and adult in markedly absolute and contrasting roles, where the adult is seen as superior and has the power—indeed, is expected—to control the children. Children are regarded to be in need of protection from their own irrationality and evilness and are not seen as capable of controlling themselves (Ansell, 2005).

In contrast with the Dionysian child, the Apollonian child is innocent, intrinsically good, almost embodying a little angel on Earth. The Apollonian child represents the positive valuation of human nature and the new order of the modern industrial society. This child is, to some extent, an emancipation from the Dionysian modes of control and the result of the emergence of the Romantic movement and the ideas about freedom and humanism that gained force in the 18th and 19th centuries (Jenks, 2005). However, the development of such ideas, far from promoting the abolition of control over children, provoked a change in the mechanisms through which the child is governed. Jenks (2005) asserts that the mechanisms used to control children started to shift toward more sophisticated technics whose underlying philosophy can be summarized as follows: Children were to be governed through freedom. In this sense, instead of exercising control through domination, the accepted (indeed, expected) modes of rearing and disciplining were now to take place via child-centred techniques which gave room to some degree of ostensible freedom. Rather than seeking tight discipline and obedience imposed by adults, children start to be seen as subjects that can be shaped more naturally—including, to a certain extent, by nature itself (Smith, 2012, 2014; Taylor, 2013). The Apollonian child therefore appears as in need of protection from external risks and the modern society which can corrupt her inner good being.

2.5.2. The Athenian Child

The Athenian child encapsulates a different yet complementary way of understanding childhood (Smith, 2012, 2014). Like the Apollonian child, the Athenian child envisages a form of emancipation from the coercive mechanisms of control typical within the Dionysian discourses of childhood. The Athenian child operates through freedom, yet the modes of governing this novel configuration of childhood are based on the idea of autonomy, participation and self-responsibility rather than on natural laws or natural development and protection from the external world. Different from the Apollonian child, who was famously to "be seen but not heard" (Jenks, 2005), the Athenian child is granted a 'voice' and the possibility to 'choose' and participate in the adult world instead of being completely detached from it. Smith (2014) defines the Athenian child as:

> a symbolic target for the relatively novel governmental mode of regulating children via strategies of participation and 'responsibilization'. Named for the Greek goddess of wisdom, the Athenian child is associated with child-rearing norms in which welfare is closely associated with autonomy, so that the child is in a sense a 'partner' in the socialisation process. Daughter of Zeus, Athena emerged from her father's forehead fully grown – she is thus the perfect representative of the (partially) self-governing, 'competent child-actor'. (p.190)

The Athenian child oscillates between discourses of children's rights linked to collective agency and entrepreneurial discourses of individual autonomy embedded in neoliberal models of social and economic development. The integration of aspects such as children's voice and choice are encouraged and expected, yet these are also mechanism to regulate the conduct of children. Instead of being rooted in external protection, these mechanisms arise from the notion of self-responsibility and proactivity, and thus the Athenian child reflects a sense of intrinsic determination. These modes of control based on self-regulation are typical of liberal governments, which render individuals as a mouldable subject who should be capable of moulding themselves (Rose, 1999).

The tactics that are fundamental for the realisation of the Athenian child, such as negotiation and participation, should, however, be interpreted with a critical eye. Smith (2012) asserts that one of the main concerns is the influence of white, western middle-class discourses in which notions of autonomy and "self-actualization through

choice" are collapsed with the idea of agency and used as a mechanism to manage and regulate children's conduct toward particular interests (Rose, 1999, p. 165). Such discourses could bifurcate in different directions and have a counterproductive effect. For instance, it could respond to consumerist tendencies driven by market discourses in which children are taken as a target that can influence parents' decisions through 'pester power'. In this case, narratives of children as tyrants might paradoxically be produced, rather than depicting them as responsible social agents. Likewise, the emphasis on individualistic models of agency might unfairly position children as accountable for the degradation of the planet and as responsible for solving a whole array of pressing socio-environmental problems on their own. One of the more persistent problems with the individualistic view of agency is that it runs the risk of obscuring the influence(s) which social structures, socio-historical conditions and other agents have on the ways in which children and adults exercise and negotiate agency (Abebe, 2019; James, 2010; Mayall, 2012; Tisdall & Punch, 2012).

Throughout this section, I have described three broad configurations of childhood, each of which is summarised in Table 2. These three images serve as a baseline for the more specific images of childhood which I examine and link to EE approaches in the section to follow

	Dionysian	Apollonian	Athenian
Image	Evil	Innocent; angelical	Social agents
Main characteristics	Problematic, abnormal, sinful	Inherently good, wise, pure, divine	Competent citizen, autonomous, knowledgeable
Underlying ideology	Christianity	Natural laws	Welfare
Effects	Segregated, must be corrected and protected from themselves	Seen but not heard, in need of protection from external risks	Are granted a voice, need to choose, and be accountable
Modes of governing	External modes of control through harsh discipline and punishment	Internal modes of subversive control through technologies of the self and ostensible freedom	Internal modes of control through technologies of the self and responsibility

Table 2. Comparative of three different images of childhood

2.6. Images of Childhood and EE Approaches in ECEC

In this section I examine three specific images of childhood and their potential links with EE approaches. I use the three broad models of childhood (Dionysian, Apollonian and Athenian) presented above to track the roots of discourses from which three specific images of childhood—namely, the innocent child, the child as becoming and the child as agent—take shape. Informed by the work of Smith (2012, 2014) and Jenks (2005), I contend that the Apollonian model can be taken as the basis to identify and further analyse romantic images of childhood, such as the innocent child, while the foundations of more utilitarian images of childhood, such as the child as becoming, maintain many elements of the Dionysian model of childhood, although with certain adaptations. Echoing Smith (2012, 2014), I contend that the Athenian model of childhood serves as the foundation for the further analysis of agentic images of childhood, for instance, the so-called rich child.

I open this section by examining the image of the innocent child in terms of its connection to nature discourse and education in the environment approaches, which I connect to the ideas of Rousseau and the innocent child. Secondly, I discuss the image of children as becomings and how this links to the education about the environment approach as well as other dominant theories, such as developmental psychology and economic welfare discourses. Lastly, I examine the image of children as social agents in relation to Education for the Environment approaches.

2.6.1. The Innocent Child and Education in The Environment

The innocent child can be traced back to Rousseau, who introduced the notion of children as inherently good creatures who, unlike adults, are not corrupted by distorted modern society (Gutek, 2011). Rousseau is one of the most influential authors whose legacy has spanned centuries and influenced global discourses on childhood and education (Jenks, 2005; Lee, 2001; Taylor, 2011, 2013; Wilson, 2022). Smith (2014) asserts that "the image of the Apollonian child which in its modern form was 'birthed' by Rousseau and the Romantics is rooted in the idea of 'natural' development and an approach to child-rearing emphasising gentle nurturance so as not to interfere with the 'normal' developmental process" (p.173).

One of the main arguments in this thesis is that the innocent and naturalised image of childhood deployed by romantic narratives has produced discourses that generate resistance to critically engage with EE and sustainability themes in ECEC (Duhn, 2012; Elliott & Davis, 2009; Elliott & Young, 2016; Samuelsson & Kaga, 2008). This argument develops from the assumption that romantic pedagogies share an image of the child as innocent. This image is in close connection with ideas of the pure and divine, which impact theories and discourses about children's learning and development—and thus the way both children and adults relate to each other and to their surroundings (Duhn, 2006; 2012; Smith, 2012). In this discourse, the child appears as a vulnerable creature who should be shielded and separated from the material adult world. On the one hand, children are pictured as innocent and at-risk, in need of protection and expected to remain aside from the socio-environmental problems they themselves see and experience (Lesnik-Oberstein, 1994). On the other hand, nature, which is portrayed as a safe and untouched natural oasis, represents the shelter for children. Nature is therefore a cure but also a moral authority that defines what is expected, what is good and *true* (Daston & Vidal, 2003). Turk (2021, p. 306) asserts that in "many cultural and historical contexts, the concept of nature is often used to consider standards of the morally right, the good and the valuable".

Another common narrative associated with romanticism is the belief that nature is a "unified whole" which underlies the assumption that the "true self" can only be found in nature, which implies that the urban environments, given the lack of comprehensive nature experiences, can lead to a less "in touch" self, as learning to be oneself requires experiential learning in "pure" nature (Duhn, Malone & Tesar 2017, p.1359).

In the field of EE in ECEC the connection to nature discourse appears to undergird education in the environment approaches. Based on the understanding that children in modern societies have been alienated from nature, the goal of EE is to promote stronger bonds between children and the natural world (Somerville & Williams, 2015). The importance given to promoting children's connection with nature also links to the assumption that the more time children spend outdoors (i.e., in nature), the more likely they are to appreciate and take care of it (Chawla, 2007; Chawla, 2020). The reasoning behind these ideas is that children learn best in nature when

exposed to it early, particularly in areas devoid of human traces. Therefore, is expected that if young children spend time in nature, they will develop a strong connection to the natural world and be less likely to exploit it as adults (Duhn, Malone & Tesar, 2017).

To this regard, is worth noting the work of Elliott and Davis (2009) who found that among preschool teachers there is a tendency to assume that EE refers only to bonding with nature. Likewise, Somerville et al. (2015) in a systematic review of the literature in the field reported that the connection to nature orientation is a dominant one among both research and practitioners and it is seen as "a continuing tradition of environmental education in which the fundamental aim is to connect children to the natural world" (p.109)

Related to the above, an emerging discourse that has recently gained traction is that if children do not have the chance to spend enough time outdoors and if they are introduced to topics related to environmental problems 'too soon', children could develop 'ecophobia', which is defined as an aversion, rather than a sense of attachment, to nature (Sobel, 1996). Similarly, Louv (2005) contends that the short amount of time people, and particularly young children, spend outdoors is detrimental for their wellbeing and could result in behavioural problems, such as what he calls a 'nature deficit disorder'. Within this discourse, exposing children to nature is framed as the "antidote to nature-deficit disorder" (Louv, 2008, p. 206). This, paired with the image of the innocent child, have produced discourses that limit EE to bonding with nature, while implicitly rejecting the idea of children as social agents who are aware and might have a say about the socioenvironmental problems that affect life of Earth.

One of the problems with these ideas is that they echo notions of protecting children from external dangers, while they also reduce the socioenvironmental crisis to a mental or developmental issue, thus losing sight of the social, political and economic aspects of EE and sustainability. These premises have also been used by some scholars (Smith Sebasto, 2011; Nielsen & Calder, 2009) to argue that critical approaches to EE which encourage dealing with and learning about sustainability's wicked problems could be harmful for young children. Hence, carrying over developmental and romantic ideas of childhood, topics related to environmental

problems are regarded as 'age inappropriate' and disruptive to children's natural course of development. Drawing from these narratives, contemporary discourses of childhood have created a picture of a child that needs to be brought back to nature, thus calling for the re-connection of children with the natural world around them (Taylor, 2013).

A further problematic aspect is that the connection to nature discourse disregards the 'natural' in the urban and it fragments the environment into, either pristine nature or not-natural environment. The unnatural environment such as cities or urban spaces might then be overlooked and removed from the sustainability and EE agenda. This is particularly concerning given that most children are now growing up in cities.

I argue that the historical legacy of ECEC that has produced the idea of a special connection of childhood with nature needs to be critically reviewed and deromanticized in order "to render it less assuredly natural and normal and to reconfigure it as infinitely more dynamic and complex" (Taylor, 2012, p. xiii). In this vein, I follow Taylor, who speaks of a "conflation of Nature and Childhood" as having an "enduring and seductive appeal" that permeates children's culture, places and education systems, creating a contemporary discursive truth about the nature of childhood and the purpose of ECEC. I also contend that such a taken-for-granted relationship between nature and childhood impacts the ways in which topics of EE and sustainability are dealt with in ECEC. For instance, contemporary ECEC pedagogies embedded in romantic and naturalistic views of childhood, together with anxieties over children's disconnection from nature, could lead to the adoption of a "nature by default" approach, where play in nature and spending time outdoors is used as an ineffective bandage to restore this separation (Elliott & Young, 2016, p.58). Furthermore, the nature-by-default approach alone, with its roots in romantic discourses, has not resulted in significant adjustments towards a sustainable future. To the contrary, these relatively minor efforts ultimately represent "weak examples of sustainability" (Elliot & Young, 2006, p.62).

Another argument in this thesis is that romantic and humanistic discourses of a natural childhood and education in ECEC which show a strong parallel with Rousseau's thinking are still dominant in contemporary theories and discourses of

childhood, particularly within the so-called alternative pedagogies that embrace the idea of education in the environment and the re-connection of children with nature (Duhn, Malone & Tesar 2017; Taylor, 2013). There are two features that I wish to highlight, as these were revolutionary and thought-provoking at the time, and they are still relevant in approaches to ECEC advocating for a natural childhood (Taylor, 2013). One is the notion of negative education, and the other is the idea of a natural upbringing based on an idealised natural childhood.

Rousseau used the term 'negative education' as the antithesis of dominant formal education models of the time. For him, the first education that young children receive should be merely negative, meaning that direct instruction and formal teaching should be avoided. He believed that "doing nothing at first would make a marvel of education. […] [B]y not doing anything, you would achieve the best education. Do the opposite of what is customary, and you will almost always be right" (Rousseau, 2006/1776, p. 81).

Rousseau's ideas about the education of the young child reversed the dominant image of the virtuous adult that needs to instruct and correct the evil irrational child. He placed children as the purest innocent creation of nature and prioritised the natural state of humans and the natural environment as the optimal condition for good education and development. Since this discourse posits nature as superior to society and given that children are seen as closer to nature, the child emerges as a "superior state of being" (Taylor, 2013, p. 10). Following this logic, what grants children their virtue is the fact that they are not yet adults and have not been corrupted by society. The child is, therefore, seen as angelical and divine—and no longer evil, as used to be the case in accordance with, for example, the Dionysian model of childhood.

This new Rousseauean way of seeing children represented a strong critique to the dominant contemporary discourses, not only of education, but also to the view of the civilised European man as exemplar. However, this thinking is built on a binary logic that positions the different actors as opposites and that furthermore reproduces stereotypes. For instance, despite Rousseau's critique to modern society and man, he evinces fixed ideas about gender roles and identities rooted in the notion of a natural order. In his writings, Rousseau constantly refers to the *education of man*, yet

his texts were directed to women and placed women as more fit to look after young children. The implication is that women are seen as naturally more adept to educate and care for the young child because they are also closer to nature. In the logic of reversed dualisms, women (like children and nature) represent the opposite of the modern and corrupted man born of modern civilization. The importance of women and their maternal role in children's upbringing during the first years of life is thus naturalised and normalised within Rousseau's thinking, being seen as essential and naturally good:

> Without dispute, it is the responsibility of women: if the author of nature had wanted to entrust it to men, he would have given them milk to raise children. Thus, in education treaties, it is necessary to speak specifically to women. (Rousseau, 2006/1776, p. 17)

According to Ailwood (2008), the combination of romantic discourses, gender stereotypes, the innocent child and developmental appropriateness contributes to the normalisation of a specific form of childhood and the idealisation of a maternal teacher. Duhn (2012) adds that in the scenario of EE in ECEC, maternalism acts as a component that "complements childhood innocence by presenting the adult in a protective and supportive role, reinforcing the notion that ECE should steer away from complex, and, in the case of ecological sustainability, potentially political issues" (p. 20).

Another core aspect within Rousseau's notion of negative education that also shows a dualistic logic is the focus on the body rather than on the development of reasoning, as he stated:

> Exercise his body, his organs, his senses, his strength; but keep his soul idle for as long as possible... consider all delays to be advantageous... let childhood mature in children. Finally, if any lesson is necessary, beware of giving it today, if you can delay it without risk until tomorrow. (Rousseau, 2006/1776, p. 81)

This is a key point to understand how the dynamic between the child and the adult changes because the image of children as naturally good and the belief that childhood as a stage of mainly physical development become dominant. Another relevant message within Rousseau's thinking is that childhood is not seen as something that needs to be overcome or hurried but rather as something to be

preserved and protected, which is still a popular narrative visible in rearing practices, education and policies in the West writ large.

An example of the materialisation of Rousseau's romantic legacy in contemporary education is reflected in the kindergarten model developed by Friedrich Froebel, another ECEC pioneer. He employed the metaphor of a 'garden' that grows freely to construct a pedagogy based on the principle of play in and love of nature and which reflects the ideas of childhood as a period of innocence and joy characterised by a strong connectedness to nature (Heiland, 1993; Castillo et al., 1980). Different from Rousseau, who did not develop a pedagogical model or a method as such, Froebel was able to outline more specific guidelines for ECEC. His kindergarten model was elaborated under the rationale of a method that mirrored nature's laws and that, at the same time, respected and protected the natural essence of children (Brosterman, 1997). The kindergarten model helped popularise the image of the innocent child attuned with nature, which has since become an influential discourse in ECEC policy and practise (Branscombe, Castle, Dorsey, Surbeck & Taylor, 2000; Sorin, 2005; Woodrow, 1999).

Historically, in the ECEC arena the idea of children as naturally connected with nature has been echoed by many scholars, educators and pedagogies, particularly by the so-called alternative education movements. For example, Montessori and Waldorf pedagogies emphasise the unique and pure relationship of children and nature, accordingly championing didactics that incorporate the rhythms, goodness and benefits of nature (Fuchs, 2004; Taylor, 2013). Other pedagogical approaches have also employed the metaphor of a thriving garden but from a different perspective. For example, in social pedagogy the thriving garden refers to creating conditions for people to develop in diverse ways, depending on their specific needs and capabilities, rather than by following the universal laws of natural development or spirituality (Eichsteller & Holthoff, 2011). Reggio Emilia approaches also employ a similar garden metaphor by casting the environment as a second teacher, yet simultaneously embracing a contrasting image of the child as a social agent (Malaguzzi, 1994). I argue that the meanings that the connection to nature discourse and the metaphor of the garden evoke when these are paired with romantic images

of childhood differ greatly from the ones that emerge from a view of children as *becomings* or as social agents.

In the following section, I move to explore the image of the child as becoming and how it relates to a different EE approach, namely, education about the environment.

2.6.2. Children as Becomings and Education about the Environment

The notion of children as becomings gains its meaning from the contrast it holds to the idea of children as complete 'beings' in here and now. The image of the child as becoming is embedded in the idea that childhood is preparation for adulthood and that, as such, the aim of education is to equip children for the future. This view of children also carries the assumption that children are ready to 'absorb' all the content provided by adults. Thus, children are seen as mere empty 'vessels' that need to be filled with information.

The image of the child as becoming has elements that correspond to the Dionysian model of childhood in that the imaginary of the evil child prevails, yet now depicted as the problematic child or the child at risk of failure who must be monitored in order to succeed. There is also a difference in the ways of governing childhood: Instead of promoting physical punishment or harsh discipline, the child as becoming is to be moulded and corrected via strategic interventions, mainly driven by statistical and psychological theories. In this sense, whereas the image of the innocent child analysed earlier relies on the notions of natural childhood and a maternal upbringing as guides to pedagogical praxis, the child as becoming is driven by discourses of school readiness, economic stability and welfare, with a heavy emphasis on measurable outcomes and results.

The notion of "adults in training" is useful to encapsulate the idea of children that are no longer conceived of as inherently innocent or good and that, instead, are recognised as future adults full of potential (Sorin, 2005, p.16). Children's capacity to learn, solve problems and act is highly valued. This configuration of childhood "does not ignore childhood but positions it as a step along the path to greater achievement" (Sorin, 2005, p.17). The image of the child as an adult in training is based on the discourse that the early years are fundamental for children's future development, as it is a period during which adult skills and attitudes are developed. Still however,

childhood is seen merely as a transitional period and a sort of dress rehearsal for adulthood.

The ideologies informing these views have been strongly influenced by managerial and business-like sectors, thus placing productivity, efficiency and performativity as key aspects in the field of ECEC (Ball, 2003). Based on competition, markets, contractual relationships, individual choice and an image of children and teachers as self-regulating autonomous subjects, this discourse also aligns with consumerism, privatisation and individualistic values (Moss, 2010).

In this narrative, children are supposed to progress successfully, efficiently and timely from one developmental stage to the next until they achieve adulthood and become good candidates for their respective roles in the workforce and the overall social order. Likewise, teachers' role is redefined, and these become central in children's training. Teachers are responsible for providing evidence that the investment made in ECEC is likely to offer a good return (Woodrow, 2011). I argue that because of the dominance of managerial discourses, the meanings and the relationship of children with education and the environment also changes. This is because the focus becomes increasingly focused on producing demonstrable outcomes. As a result, EE tends to be valued more for the somewhat circumscribed measurable academic outcomes it may offer rather than for its broader social and environmental implications and potentialities.

Education about the environment with a focus on pro-environmental behaviours is a common approach at the ECEC level. For instance, various studies have shown that in ECEC there is a tendency to believe that knowing more about the environment and environmental problems could eventually make children behave in an eco-friendlier way (Davis, 2009; Hedefalk et al., 2015). Knowledge about the environment is important to develop pro-environmental behaviours, yet this depends on the type of knowledge and how it is used. Since factual knowledge on its own is not necessarily sufficient to translate into concrete pro-environmental behaviours and actions, knowing what type of actions could be taken and how these might work toward avoiding environmental damage is imperative (Otto & Pensini, 2017).

With the marked influences of managerial and neoliberal discourses, however, the risk is that the dominance of this knowledge-based, outcome-driven approach to EE

contributes to position EE merely as another objective content subject in the curriculum (Palmer, 2003). Moreover, a simplistic understanding of pro-environmental behaviour as a set of standardised knowledge, skills and results carries an idea of change based on replacing old practices with new ones and a view of education as a mechanistic process with prescribed outcomes. In this sense, behavioural perspectives become problematic because they assume "change is as simple as 'out-with-the-old' and 'in-with the-new'. Yet the old is not a static 'thing' that can be discarded because integral to this 'thing' is also the world and the history from which it emerged" (Schudel, 2016, p. 260). By ignoring the power dynamics which remain constant behind them, behavioural approaches contribute to maintaining a certain underlying status quo.

The managerial discourses have also opened a public debate about, for instance, how children should be educated and socialised in order to become successful citizens. These debates expose concerns about the implications of seeing childhood investment as a fixed formula. One of the major critiques is that these discourses and their implications create a narrative in which children are seen as commodities with the goal of increasing investment return, leading to the idea that children are only valuable when they are an asset to society. Burman (1994) asserts that within this discourse, children become individuals that can and need to be socialised, educated and managed in a certain way to become a strength for society. This then impacts how children are treated as well as the expectations which others put on them. On the one hand, children with the potential to learn and adapt to the norm are seen as a better investment-return option in the future and are framed as the salvation and hope of humanity. On the other hand, children who are outside of the expected dominant model of childhood represent potential problems that need to be prevented and monitored in order to mitigate their potential negative impacts (Burman, 1994).

Despite its limitations, the managerial discourse has had a great impact on theory, policies and practice in ECEC worldwide. A prominent theory that has advocated for this approach is James Heckman's (2012) investment-return model that places the early years of human development as a key stage of life that will define not only the success of the individual but also the development of the nation. In this sense, investing in ECEC is framed as an indicator of the prosperity of social and economic

development. These messages are echoed in global political agendas, which make the claim that "choices made and actions taken on behalf of children during this critical period affect not only how a child develops, but also how a country advances" (United Nations Children's Fund, 2001, p. 9). For instance, this is visible thorough the recent focus on ECEC and the changes to the basic and compulsory education systems which made preschool mandatory in many countries, including Mexico.

Developmental Psychology has been among the most dominant of disciplines within the field of ECEC, and it has served as the basis of myriad curricula and practices. Dominant theories of developmental psychology sustain a view of a standardised childhood with a strong emphasis on cognitive development and fixed milestones. This compliments the image of the child as an adult-in-training as well as the widespread managerial discourses previously discussed.

Jean Piaget's (1952) theory of child development, based on pre-established and universal stages through which normal children progress, is also widely known in ECEC. One of Piaget's main premises is that children construct their own knowledge by interacting with their material environment, yet he also believed that children's capabilities are limited by their cognitive development. As such, the main indicator of children's intellectual development and capabilities is maturity, which is associated with reason and logical thinking; each of these indicators is at once correlated to a child's age. Likewise, Piaget claimed that intellectual and moral development precede and are a condition for children's learning capacities. Under this perspective, learning occurs as an individual, internal mental process. These developmentally driven ideas have contributed to the formation of images of childhood that portray children as half-adults, egocentric and 'lonely scientists' (Fawcett & Watson, 2016). They have also contributed to the view of adulthood as the peak of human development (Alderson, 2013).

With the scientific turn and its emphasis on statistics and standardisation, starting in the late 19th and continuing through the 20th century, the education field began to be dominated by behavioural models of science. Psychology, defined as the science that studies behaviour, was able to step out of its reputation as a merely superficial speculation about how people think, feel and behave in order to become a more standardised and formally substantiated discipline able to explain and even predict

behaviour (Ribes y López, 1985). Taylor notes that "the disciplinary alliance between education and the behavioural sciences inevitably realigned the understanding about what is 'natural' about natural education" (Taylor, 2013, p. 43). With this shift, discourses around the benefits of children's connection to nature gained force in ECEC, though this time through the economical and managerial stream which promoted the idea of "maximising children's potential" (Smith, 2014, p. 2).

2.7. Pedagogical Models

The aim of this section is to explain the main assumptions, theoretical foundations and educational principles of the Waldorf and the Reggio Emilia pedagogical approaches. Expounding on these distinct pedagogies is relevant to gain a better understanding of each of the case studies which make up the present study. At the same time, it also serves to envisage dominant discourses and images of childhood. I start with the Waldorf pedagogy and then follow with the Reggio Emilia.

2.7.1. Children as Social Agents and Education for the Environment

The image of the child as a social agent shares strong links with theories rooted in the sociology of childhood (James & James, 2004; Jenks, 2005). Instead of being seen merely as becoming, the child as a social agent is also acknowledged as being. She gains her value and recognition as a person in her own right, now and in the future, for being a child and not only for the adult she will become (James, 2004; James & Prout, 1997; James et al., 1998; Jenks, 1982, 1996; Qvortrup, 1991, 1994). This image implies that children are both beings and becomings, which means that they are valued as social subjects in the present as well as in the future. Thus, far from denying the biological dimension of childhood, this proposal offers a different reading of it.

The child as a bio and social agent deploys the message that early childhood is the stage of life where people have the greatest ability to learn, and they are therefore constantly exploring and trying to make sense of other people and the world around them (UNICEF, 2019; Gopnik, 2009). This course of development, rather than a sign of incompetence, is re-signified as a unique opportunity to learn. For example, Gopnik (2009) points out that that the first years of life are not only the stage of

development when humans learn the most but also a period of life in which we are particularly good at being flexible, creative and imagining new possibilities. Contemporary studies have also shown that compared to older children, younger ones tend to be more open to change when they encounter new information. All of these characteristics then position early childhood as the ideal moment to learn (Gopnik, 2009; Gopnik et al., 2017).

The early years are also now recognised as a crucial time to foster long-lasting values, attitudes, skills and behaviours that will set the basis for creating a relationship of respect for others as well as for the environment, including a stronger commitment to living in more sustainable ways. The central argument is that:

> Young children have the capacity to be active agents of change now, as well as in the future.... This is because early childhood is a period when the foundations of thinking, being, knowing and acting are becoming 'hard wired', and relationships – with others and with the environment – are becoming established. (Davis, 2008, p. 20)

The child as agent can be positioned within the broader configuration of the Athenian model of childhood (as developed in Smith, 2012) in that she is granted a place within the adult world and recognised as a human being in the here and now. This serves to acknowledge that children's lives and wellbeing matter and that they, as any other human being, are "legitimate right-holders and claim makers in the here and now" (Qvortrup, 2009, p. 632). As a logical extension of this, we can thus conclude that they should not need "instrumentalising arguments to be justified" (Qvortrup, 2009, p. 631).

The agentic child has contributed to the critical questioning of dominant and well established discursive truths held about children (James & James, 2004). These include poor notions of children as passive receptors, as half-adults and/or becoming along with theories of socialization and maturation (Tisdall & Punch, 2012). Importantly, the image of the child as a social agent sits in stark contrast with the view of the innocent child separated from the real world (Duhn, 2012).

The child as a social agent is therefore seen as capable and competent—and, perhaps most significantly, as a citizen who has not only the right but indeed the responsibility to know more about the world around them, have their voices heard

and be included in activities that concern them. Participation is one of the core principles of this discourse. Moreover, this view has been influenced by and it in turn foments children's rights as well as appeals for a more equal and just coexistence of children and adults. In this context Davis (2014, p.25) highlights the importance of recognising "children's agentic participation rights". Both participation and having enough opportunities to develop environmental knowledge are essential to this purpose since children must have the opportunity to be listened to but also to "being responded to as a person who genuinely contributes to the daily common life at the preschool" (Hägglund & Johansson, 2014, p.38).

This rich view of childhood encourages and supports the incorporation of more critical and broad approaches of EE in ECEC in which sustainability must be seen as essential rather than merely optional (Elliott, 2010). The idea of the agentic child lays the foundations for the field now known as Early Childhood Education and Care for Sustainability (ECECfS), a movement that has gained notable momentum and is supported by several authors (Boyd et al., 2018; Davis, 2005, 2009, 2015; Davis & Elliott, 2014; Duhn, 2012; Elliott, 2010; Engdahl, 2015; Pearson & Degotardi, 2009; Pramling Samuelsson & Kaga, 2008; Siraj-Blatchford, Mogharreban & Park, 2017; Siraj-Blatchford, Smith & Pramling Samuelsson, 2010).

I contend that ECECfS shares many of the principles of Education for the Environment approaches, such as the recognition that "children are competent, active agents in their own lives and that they are affected by, and capable of, engaging with complex environmental and social issues" (Davis et al., 2008, p. 113). Likewise, it holds a critical perspective on education and childhood that "steer[s] away from romanticized notions of childhood as an arena of innocent play that positions all children as leading exclusively sheltered, safe and happy lives untouched by events around them" (Davis et al., 2008, p. 113). Overall, ECECfS, much in the same vein as other more critical approaches of EE, refers to an education that invites young children to reflect, learn and act upon important sustainability themes, such as climate change, human rights, justice and/or responsible consumption (Hägglund & Pramling Samuelsson, 2009).

Nevertheless, some scholars have noted that the notions of the child as an agent are often assumed and reproduced but not critically examined (Tisdall & Punch, 2012).

Agency can have diverse meanings which often compete. One of these assumptions is that agency is the same as individual freewill and participation. Under this perspective, agency relies on an "independent selfhood" that steers away from the wider socio-cultural context (Abebe, 2019, p. 5). Seeing agency merely as autonomy and independence would imply decontextualising it as something that depends mainly on children's will and capacity (Abebe, 2019; Durham 2011). As Prout (2005) explains, "the agency of children as actors is often glossed over, taken to be an essential, virtually unmediated characteristic of humans" (p. 65). Agency from such an individualistic point of view is often understood simply as personal choice associated with inner motivation and it becomes a matter of self-control and self-responsibility.

A different notion of agency comes from discourses on children's rights. Here, participation and listening to child voices are highlighted as rights which, despite being fundamental, have been systematically neglected (Abebe, 2019; Durham, 2011). Yet, Bühler-Niederberger (2007) makes the point that participation still tends to be framed as an individual right, thus eclipsing the sociological meaning of agency. Consequently, a double constraint then occurs when children's voice and participation is simplistically understood as being a matter of either choice or tokenism.

An alternative to these individualistic discourses is to look at rights from a collective stance. Davis (2014), for example, proposes a shift toward an "expanded right framework" that sees foundational human rights as part of broader bio and eco-centric rights and which considers agentic participation rights and collective rights as interconnected, inextricably embedded within each other.

So far, I have presented the theoretical and conceptual framework of this thesis, starting from the notion of EE approaches that can be seen as narrow or broad. I also reviewed key concepts such as discourse vis-à-vis power, dominant versus alternative discourses, governmentality and images of childhood. Finally, I discussed the potential links between three specific images of childhood and EE approaches in order to elucidate how particular constructions of childhood link to ideologies as well as how theories from different disciplines shape the ways in which EE in ECEC is understood and justified by these dominant discourses.

In the next section, I move to a more specific review of the two pedagogical models that are at the centre of this thesis: Waldorf and Reggio Emilia. These represent the two models deployed by the preschools where this study was conducted.

2.7.2. Waldorf Education

The Waldorf education approach is based on the ideas of the Austrian philosopher Rudolf Steiner. He founded the first so-called Waldorf School in 1919 in Strugar, Germany with the hope for a different type of education that could offer an approach that went beyond mainstream rational thinking and materialism, which had begun to dominate the education system and society of his time.

Steiner worried about materialism eclipsing spirituality. He believed that a realist education was replacing an ideal one, that technology was surpassing nature and that universal processes threatened to obscure individual contexts. Furthermore, he worried that educators were thinking too scientifically, rather than artistically, and that they were teaching in a disjointed, linear fashion as opposed to from a more holistic approach (Uhrmacher, 2004).

Therefore, for Steiner, the purpose of education was the formation and realisation of ethical individuals, as opposed to the development of merely rational thinkers (Stoltz & Weger, 2012). Likewise, he emphasised the development of the body, feelings and spirituality, which he believed could advance human evolution (Steiner, 1996, 2003).

Perhaps one of the most appealing principles of Waldorf pedagogy is the idea of a holistic natural education that is in tune with the child and allows for freedom and creativity. Waldorf education stresses the importance of not rushing children, including the use of free play, expressive arts and holistic learning through imitation and hands-on experiences, as well as spending time outdoors or otherwise being in close contact with nature (Oldfield & Boyd, 2017). All of these principles are aligned with other contemporary child-centred approaches of education that value the importance of learning and bonding in nature, as opposed to dominant models of education based on academic, measurable and transmissive learning. However, there are several points that make Waldorf education unique and which demand further attention and examination in more detail. One is anthroposophy and the other

Steiner's views on ECEC, particularly his ideas on childhood and the role of teachers, each of which I present in the sub-sections that follow.

Anthroposophy

Anthroposophy is a theoretical approach Steiner himself developed as a theory to counter mainstream science, an alternative and more comprehensive way of understanding the world around us—in both epistemological and ontological terms. Anthroposophy became the basis of most of Steiner's work, including his writings on education. Etymologically, the term 'anthroposophy' can be broken down into its constitutive parts to mean human ('anthro-') and wisdom ('-posophy'). It aims to investigate "the place of human beings in the world" (Keith-Sagarin, 2003, p. 308). Anthroposophy emerged from Steiner's claims about a spiritual world, and it expands to different areas of knowledge, such as architecture, design, medicine, spirituality and writings on the evolution of humankind and the universe (Stoltz & Ulrich Weger, 2012; Uhrmacher, 2004).

Steiner saw the spiritual world as a higher—yet real—world that can be known and accessed through what he called spiritual science. For Steiner, the spiritual world was not only real, but it could also be learnt and accessed through close observation (Uhrmacher, 2004). Yet, Steiner also believed that observation is limited by the capacities of human perceptive organs, arguing that there are other unique organs of spiritual perception that are dormant in most people but can nevertheless be developed. He also stated that by developing the spiritual organs of perception, individuals would be able to become higher spiritual beings, attain spiritual evolution and even achieve reincarnation (Steiner, 1996, 2018).

The processes of reincarnation and karma, as well as the correlation between the macrocosm and the microcosm, are two fundamental premises in Steiner's occult spiritual understanding of the world. Steiner held that the universe and humanity evolved from a single primordial spiritual foundation (Ullrich, 1994). He also believed that humans, even when not fully aware, are always closely connected with the cosmos, a belief which closely resembles the idea of a special connection with nature, the spiritual and the divine (Uhrmacher, 2004). By framing the spiritual as a different type of science—in this case, an occult science—, Steiner attempted to create an argument against Kantian models of pure reason and make room for

emotions, intuition, creativity and, most crucially of all, spirituality (Stoltz & Weger, 2012).

The emphasis on spirituality and the divine in Steiner's ideas about young children's education also denotes the influence of early modern European humanism, in which religious beliefs and philosophy dominated the discourses on truth (Rose, 1999; Smith, 2012). However, Steiner's proposition was that spiritually could somehow be recognised as some sort of science, rather than being completely alien, i.e., diametrically opposed, to it. In this sense, as Ullrich (2000) argues: "The paradox of anthroposophy resides in the fact that something that is in reality a myth of the second order is proclaimed in the name of science" (p. 4).

Taylor (2013) asserts that what distinguishes European pedagogical models rooted in romantic conceptions of childhood, such as Waldorf education, from other pedagogies is the emphasis on the innate and spiritual nature of children, which seems to have been inherited from Rousseau and later Froebel. These romantic-naturalist pedagogical models also tend to endorse religious beliefs and romantic notions of childhood (Fuchs, 2004).

Steiner on Early Childhood Education

Steiner's ideas on education can be linked to the alternative new education movement of the 20th century that aimed to challenge dominant views of transmission-based and purely academic education models. Different from authors like John Dewey and Maria Montessori, who based their pedagogy on ideas of empirical child psychology, Steiner's educational plan was founded entirely on a particular understanding of spirituality (Ullrich, 1994).

For Steiner, early childhood was mainly about making sense of the world and transitioning from the mother's womb to the physical world. Steiner developed specific principles on how and why teachers should educate children. His ideas reflect both maturational and romantic conceptions of childhood that function as a parameter to define not only what children can or should do, including when, but also the role of the teacher.

Steiner's ideas were also strongly influenced by Goethe's notions of unity and continuity in nature, the natural rhythms of nature and archetypes (Boland; 2015;

Uhrmacher, 2004). Similarly to Rousseau and Froebel, Steiner took nature as the basis for human development and as the parameter by which to guide children's education and upbringing. Likewise, he saw modern society and technological development as corrupting forces that attempted to disrupt childhood's natural evolution(s). Moreover, he also carried over the idea that children develop better if they are guided by the rhythms of nature. In this regard, it is important to note that Steiner did not base his views of childhood on theories of child psychology but on his own "cosmic spiritualistic anthroposophy", even though he constructed his educational assumptions based on a naturalistic approach of development (Fuchs, 2003).

Steiner argued that humans follow a particular physical, spiritual, emotional and intellectual course of development, the same which is organised into septenniums. Steiner extended this idea by arguing that there are three stages of human development, each defined by physical, intellectual and spiritual millstones which occur approximately every 7 years.

According to Steiner, the first septennium of human life corresponds to early childhood, and it starts when children are born and culminates when children lose their milk teeth. Steiner contended that at this first stage children only act by imitation, not by themselves. Thus, imitation is the only way they can learn. He also believed that children at this stage are rather amoral and should not be judged against adults' moral principles. For Steiner, it made little sense to approach children with explanations, conversations, opinions or theories, as this was a human capacity that, in his view, depended mainly on the 'consciousness soul', which develops later in life. Instead, he highlighted the idea of learning through example and encouraged teachers to act as exemplar role models and "live what the child is to imitate" (Steiner, 1996, p. 104). These assumptions carry other key messages that are also fundamental within Steiner's pedagogical and ideological principles. As articulated in his own words:

> We must place particular value upon learning by example and the child's capacity to imitate. Thus, the correct thing to do is to act so the child can imitate as much as possible. In that sense, we must emphasize the child's physical development between the first and seventh year. During that period, we cannot affect the higher bodies through educational methods, quite certainly not through conscious education. You affect these bodies

through who you are insofar as they are not occupied with their own development. People can activate the child's good sense through their own good sense. Just as the mother's healthy body has a healthy effect upon the child's body, the teacher must attempt to be a well-rounded and self-contained person, to have high and good thoughts while in the presence of the child. (Steiner, 1996, p. 44)

These assumptions have important implications for the way children ought to be educated. The idea is that teachers should temper their didactic impulses by limiting these to the mere modelling of good, morally sound behaviours. The emphasis on maternal care is also a core component of Steiner's theory. For him, the teacher appears as the legitimate figure of authority who should be guided by principles of motherhood and maternity, thus deploying more subtle, warm and gentle modes of control. Steiner's view of adult authority is structured around the idea of freedom embedded in the discourse of natural laws (Wilson, 2022). As Steiner (1988) puts it, "authority is an absolute necessity. It is a natural law in the life of the child's soul [and] freedom can be won only through voluntary surrender to authority during childhood" (p. 61). Furthermore, young children, far from being able to self-regulate and act as responsible beings, are depicted by Steiner as dependant and to some extent unreliable creatures. Under this rationale, he argues that "it is an erroneous belief of our materialistic times that very young children should learn to decide for themselves. On the contrary, we should do everything possible to hinder that" (Steiner, 1996, p. 45). These assertions are an example of modes of governing through freedom that reflect the idea of shaping or disciplining children using biological development and technologies of the self.

Another relevant point is that while such beliefs about young children and their capacities show a passive, constrained view of childhood, for Steiner these characteristics are not limitations of the child, but rather an expression of their natural path of development, which teachers should understand and respect. In this sense, the value given to children emerges not from the assumption that children are social, competent human beings in the present, but rather by the belief that they have a special connection to nature and the cosmos and therefore should be respected and venerated as spiritual beings. As Steiner expressed in one of his public lectures, children are ultimately to be seen by the teachers as an "outer manifestation of divine and spiritual beings who have come down to earth from a

purely soul and spiritual existence in order to evolve in a physical body on earth between birth and death" (Steiner, 1995, p. 101). This idea comes out of Steiner's views of reincarnation and, therefore, gives ECEC the task of helping the spiritual being evolve into its physical form. In that sense, the child is on the one hand defined by genetic and moral factors and on the other by karma, even before birth (Ulrich, 1994).

Revisiting Steiner's ideas on childhood development and education, it is also possible to see similarities with the Apollonian child that Jenks (2005) describes. First, it crystalizes the view of the modern Western child as inherently good, almost angelical (Smith, 2012). Second, it positions children as inherently linked to nature and the cosmos, thus taking natural laws and norms as a parameter for children's education and reproducing the discourse of a natural childhood. Third, it reflects the liberal modes of governing subjects by focusing on managing the self through principles of freedom and imitation, rather than on coercive methods of control (Rose, 1999). And, finally, it echoes the romantic resentment of modern society as a thoroughly corrupted entity.

So far, I have explained the main principles and assumptions that form the basis of Waldorf pedagogy. Now, I focus on discussing some of the controversial issues and criticisms around the same, which are shown to complement the points made above. Moreover, I identify and describe some of the different ways of approaching and interpreting this pedagogy.

Steiner's ideas were revolutionary for their time and have since trigged a series of rich debates and discussions. Ulrich (1994), for example, describes Waldorf education a "beneficial practice on the foundation of a dubious theory" (p. 10). There are also debates around the way in which Steiner's ideas have been translated into practice and others regarding Steiner's references to esoterism and clairvoyance, which I discuss in the following sub-section.

One the most common criticism of Waldorf education is that is "self-referential and not moving with the times" (Boland, 2015, p. 192). Boland (2015) also suggests that:

> [T]he Waldorf educational movement is one troubled by teachers following
> a worn-out path, a tradition or just complying to a set of norms to a degree
> by dogmatism, ideologies, recipe teaching, the over-reliance on tradition,

and is one which can value safeguarding pedagogical inheritances more than developing new, and perhaps more contemporary, approaches. (p.197)

Similarly, other authors have highlighted the fact that Waldorf schools might end up being reduced to a prescribed curricula and teaching method more concerned with aligning to Steiner's ideas than with offering an education that attends to the current interests of the child and the society (Sloan, 1983; Whittaker, 2001 as cited in Keith-Sagarin, 2003). Likewise, other authors speak of a lack of formal critique among Steiner's followers (Denjean, 2014; Rawson, 2010). In this regard, Keith-Sagarin (2003) warns that if not critically revisited, Waldorf education risks falling into the category of franchise or branding; the author calls for a careful and critical examination to avoid taking Steiner's ideas as something "to be preserved in perpetuity like a colonial re-enactment" (p. 264).

Analysing the way Steiner's ideas have evolved over time and into the present day, Schlieren (2015) argues that the conviction shown in anthroposophy may be linked to the way Steiner's propositions, even when esoteric and occult, were granted the position of unquestionable truth. According to the author, this occurred under the rationale of an expanded notion of science that placed spirituality as its object of study, and as such it was deemed a valid theoretical foundation for Waldorf education.

It is important to note that the extent to which ECEC centres or schools adopt, adapt or contemplate some degree of implementation of Steiner's ideas varies. In an attempt to distinguish the different ways in which Waldorf schools address Steiner's ideas, Oberman (2008, as cited in Bolan, 2015) describes three approaches: purist, accommodationist and evolutionist. Purist views are characterised by adhering to the prescribed path and being committed to accumulated traditions and practices. There is an over-reliance on basic principles under this view that can lead to a lack of flexibility and an overly rigid approach. On the other hand, accommodationist approaches to Waldorf education combine Steiner's methodologies with other pedagogical approaches, and practices are thus more open for change and seen as hybrid entities. Finally, the evolutionist takes, rather than combining other approaches, seek to adapt Steiner's principles in a more localised way in

consideration of the social, cultural and temporal contexts of the community(-ies) being served.

Purist versions seem to be the most common because other ways of tackling Steiner's ideas tend not to be recognised as Waldorf education. Moreover, the evolutionist views need further development, and hence the purist version is seen as the true or original. Yet, this way of approaching Steiner's pedagogical philosophy has been recently criticised not only for its overreliance on its creator's original ideas but also for the dominance of Western discourses as well as the particular modes of control encountered in Waldorf preschools. Wilson (2022), after conducting an ethnographic study in a Waldorf ECEC centre in the United States, contends that the Waldorf philosophy reproduces the idea of a Western, White, middle-class protected childhood as the most legitimate and healthy. Furthermore, she stresses that the notion of child-centredness and developmentally appropriate practices, together with anxieties over the loss of childhood innocence, serve to shape and govern children in specific ways that do not necessarily align with the idea of childhood liberation and agency proposed by contemporary authors (Corsaro, 2003; James & James, 2004; Jenks, 2005).

2.7.3. Reggio Emilia

Reggio Emilia schools were founded in Italy, in the city of the same name, by Loris Malaguzzi. Since their start, Reggio schools have served a political and social purpose: They emerged as a reaction to fascism and World War II with the ideal of rebuilding society (Hall et al., 2010). The Reggio schools were therefore a response to these challenges:

> In 1945, the most pressing problem for a population that had just come out of a war was that of rebuilding, materially, socially, and morally.... The people also felt the need to overcome the ideological divisions that had lasted for two decades (Reggio Children, 2002, p. 6)

The Reggio Emilia approach is known for maintaining and enacting a progressive, visionary and democratic view of education. Malaguzzi's political and ethical understanding was that schools should prioritise the creation of collaborative environments in which children can be critical, creative and independent thinkers. Democratic education, participation and collaboration between different members of

the community are the foundations of the Reggio Emilia approach. By encouraging cooperation and collaboration among teachers, parents and children, the Reggio model also promotes an environment of mutual respect (Holmes, 2017). Thus, education is viewed as a collaborative process rather than the edification of any individual child or a private family matter. A core premise is that children's education cannot be separated from the community and the broader society, which means that education is necessarily a participatory, active and social process through which knowledge is co-constructed.

Despite being commonly framed as a child-centred pedagogy, Reggio Emilia is better understood as "child-originated and teacher-framed" (Forman & Fyfe, 1998, p. 240). As such, teachers are seen as partners and co-constructors of knowledge, and their role is to facilitate the process of learning on par with adults. This perspective presents a very different picture of children and teachers as compared to other modern child-centred pedagogies because it emphasises the concepts of collaboration and active participation. In these, the notion of working with children, as opposed to merely for them, is emphasized (Burman, 1994).

Seeing children as capable and active learners shifts the focus of education and the role of the teachers from shaping the next generation to involving children in their own development. Teachers are no longer viewed as technicians who merely manage and instruct students, nor are they mere childcare workers who mind and protect children. Rather, teachers are viewed as partners in the creative process of knowledge construction (Moss, 2006). This means that both the teacher and the child co-construct knowledge and promote learning opportunities.

When children are seen as having a great capacity for agency and self-determination, the interaction between children and adults is transformed. Children are allowed, invited and expected to form "their own ideas, express opinions, make independent choices, and play and work well with others" (Thornton & Brunton, 2007, p. 11).

An important principle of the Reggio Emilia approach is that the formal acknowledgement of the partnership among teachers, children and also parents, as well as the importance of the school for the community at large. This social focus offers "new ways to think about the nature of the child as a learner, the role of the

teacher, school organisation and management, the design and use of physical environments, and curriculum planning that guides experiences of joint, open-ended discovery and constructive posing and solving of problems" (Edwards et al., 1998, p. 7).

Another core characteristic of the Reggio Emilia pedagogy is its foundation on a critical conception of education that prioritises dialogue and reflection. Dialogue is understood to be more than just verbal words and connects with the ideas of reflective practice and critical thinking. In tune with this, the idea of dealing with complexity or problematic situations at the preschool level is seen as a perfectly valid opportunity for learning and collaborating knowledge-building—and not as something to be avoided. Problems become an occasion to find solutions through dialogue and to discover shared understandings and resolutions. Therefore, emphasis is placed on the process of "working through a problem rather than arriving at a quick solution" (Hall et al., 2010, p. 34).

These conceptions of education, children and the teacher are rooted in a powerful and rich image of children. Malaguzzi saw the child as a competent social agent who is "fully able to create personal maps for his own social, cognitive, affective, and symbolic orientation" (Rinaldi, 1998, p. 114). Differing from romantic notions of childhood, Malaguzzi saw the child as a competent person born with a hundred languages, someone who is "strong, powerful, competent, and, most importantly, connected to adults and other children" (Malaguzzi, 1993, p. 10).

Furthermore, children in Reggio Emilia education centres are recognised as citizens with fundamental rights, and they are also seen as democratic and social agents (Rinaldi, 2006). This image of childhood is consistent with the paradigm of the sociology of childhood in which children, rather than being "simply passive objects, the product of universal biological and social processes[,]... are active participants in their own social worlds and in those of adults" (James & James, 2004, p. 24).

Malaguzzi believed that children are involved in the process of forming "a relationship with the world" from the moment they are born, which means that they begin developing "a complex system of abilities, learning strategies, and ways of organising relationships" from the start (Rinaldi, 2006, p. 83). In that vein, children are encouraged to explore their environment and express themselves through their

hundred languages. Children are thus encouraged to communicate through multiple paths, "including the expressive, communicative, symbolic, cognitive, ethical, metaphorical, logical, imaginative, relational, and digital languages" (Domingues, 2019, p.18).

Hall et al. (2010) argue that the idea of the hundred languages of children relates closely to Gardner's (1983) theory of multiple intelligences, which explains how children may possess a range of skills and competencies, such as verbal and logical reasoning, spatial-visual ability, music understanding and appreciation and physical capabilities, all of which are valid and valuable—yet distinct—ways of being intelligent. The view of children as people who learn and express themselves in different ways is central to the Reggio Emilia approach, and it highlights the approach's holistic bent in regards to education while also recognising children's potential to develop an understanding of the world through their own perspectives.

Another important aspect of the Reggio Emilia approach is its practice of documentation in lieu of more traditional academic assessment, which puts a greater emphasis on teachers' and students' abilities to reflect on the learning experience rather than simply measure it. Documentation is a process of "shared observation and interpretation" that consists of using an array of methods, such as videos, photos, journals and portfolios to help children see their learning as a process and foster reflection on their own learning process (Reggio children, n.d.).

Despite the many creative and innovative characteristics of the Reggio Emilia approach, there are also drawbacks and debates regarding the way it has expanded and adapted in the current globalised world. Overall, critiques revolve around the superficial ways in which Reggio Emilia principles in ECEC have travelled across the globe, often without a true understanding of the same. Indeed, it would seem that Reggio Emilia pedagogies have often gained popularity more as a fashion than as the critical approach they are meant to embody. Moreover, it has been argued that Reggio Emilia has fallen into the grips of marketers and branding experts, resulting in its repeated implementation as a rather prescriptive and uncritical model (Landi & Pintus, 2022). For instance, there are concerns that the Reggio Emilia idea of documentation might end up being a different way of surveilling children, rather than

as the shared learning journey it was originally intended to be (Johnson, 1999; Wright, 2000).

2.8. Chapter Summary

The theories and fundamental concepts that serve as the basis for the study of images of childhood in EE have been discussed in the first section of this chapter. I have described distinct EE approaches, understood as constituents of a continuum, and which can be categorised as education *about*, *in* and *for* the environment in order to explain that there are numerous ways to understand and practise EE. Some of these are rooted in conceptions of the environment and education, learning styles and theoretical foundations that make them narrow and less critical, producing views of EE that are constrained in their scope and intent.

I have also presented and discussed the notions of discourse and power as the key concepts that serve as the basis for the critical and analytical study of EE from a poststructuralist point of view. By explaining the concept of dominant and alternative discourses, I have highlighted how power dynamics create hegemonic understandings, assumptions and practices that generate discursive truths about EE and childhood. Nonetheless, considering that power is not always a top-down force, it has not been ignored that dominant discourses can, indeed, be contested. Furthermore, I have introduced the idea of governmentality as a concept that helps to explain how power and discourse operate as mechanisms of control that mould both discourses and practices alike. This concept of governmentality is particularly relevant in the recognition of images of childhood as generative mechanisms that not only describe and define childhood but also produce different models of childhood that affect how children are perceived and treated in the real world.

The three broad configurations of childhood (Apollonian, Dionysian and Athenian) are used to identify contrasting ways of defining childhood and, importantly, ways of governing childhood. These three configurations also serve to track the roots of three dominant images of childhood: the innocent child, the child as becoming and the child as social agent, each of which I have linked with the three EE approaches: in, about and for. I have argued that the innocent child, with its roots in Apollonian models of childhood, together with the discourse of a natural childhood and the

notion of re-connecting children with nature, tends to produce narrow approaches of EE as education in the environment. I have also proposed that the image of the child as becoming corresponds to Dionysian configurations of childhood, as it pictures children as problematic and in need of correction and training in order to become successful adults. I contend that this view, paired with managerial and market discourses around investment-return formulas, tends to reproduce narrow views of EE as teaching about the environment. Here, the focus is limited to academic outcomes which are measurable and, in turn, standardised. Lastly, I have explained how the view of the child as a social agent echoes the Athenian model of childhood and links to more critical approaches of EE as education for the environment. In such models, children are recognised as competent and complete people able to understand, express and participate in dialogues and actions that concern them.

Finally, in this chapter I also reviewed the main theoretical, ideological and pedagogical assumptions of the Waldorf and Reggio Emilia pedagogies, emphasising the contrasting ways in which each conceives of children, education and development. Likewise, I have outlined some of the major critiques of both approaches. In the next chapter, I provide a detailed accounting of the national and educational context of the specific study carried out for the purposes of the present thesis.

3. The Mexican Context

To situate my study of EE in Mexican preschools, in this chapter I provide an introduction to the Mexican context which goes from general characteristics of the country to more specific exploration of EE at preschool level. This chapter is organised into four sub-sections, the first one being an overview of the geographic, economic and political characteristics of Mexico including a summary of some of the main environmental concerns in the region(s). The second sub-section comprises an outline of the education system in Mexico, where I explain how the preschool level is regulated and summarise the main types of services and provisions in the country. I continue with an overview of EE in Mexico in an effort to present a profile of the topic being researched. This is meant to serve as a basis from which to interpret and understand the traditions, approaches and discourses that have dominated the field in the country. I conclude this chapter with a more focused exploration of the ways in which EE has been tackled in the preschool curricula, paying special attention to the different pedagogical approaches and potential dominant discourses that have informed theory and practice of EE.

3.1. Mexico and Quintana Roo at a Glance

Mexico is a federal republic, politically organised into 32 states in addition to a separate federal district: Mexico City. The states of the Mexican republic are further divided into municipalities and governed by governors and municipal presidents, respectively. Overall, the state and local budgets in Mexico are heavily reliant on federally allocated funds due to the country's historical practice of operating a highly centralised governmental structure (OECD, 2006).

The president, elected every six years, is the head of state as well as the head of the government. State elections take place every six years, as well, but not necessarily in the same year as federal elections. According to the country's constitution, re-election is not permitted, and no one who has previously held the position, even on a temporary basis, is eligible to run for or hold the same position again.

Each time a new president or governor assumes power, new governing plans with unique aims, objectives and priorities are presented by the elected government.

Effectively, this means that national and state plans change every six years, sometimes with no continuity from the previous government. This continually fluctuating governance dynamic is important to recognise when contextualising the constant changes to the curricula over the years

3.1.1. Geographical Location and Biodiversity

Mexico is a megadiverse country, boasting a variety of landscapes and ecosystems: There is a desert in the north and tropical weather in the south, with more than 30 distinct indigenous groups residing throughout the national territory. The preschools where this study was conducted are located in Playa del Carmen, the most populous city in the municipality of Solidaridad, which belongs to the state of Quintana Roo, situated in the southeast of the country in the region known as the Mayan Riviera (see Figure 2).

Figure 2. Map of Mexico showing the location of Quintana Roo

One of the most attractive characteristics of the state of Quintana Roo is its biological and cultural diversity. Quintana Roo is a popular tourist destination due to its warm temperatures, turquoise Caribbean Sea, exuberant jungle and rich Pre-Columbian Mayan heritage. Located on the Yucatán peninsula, Quintana Roo has a

myriad of unique characteristics. For instance, it is the only state surrounded by the Caribbean Sea and with two international borders (Belize and Guatemala).

The marine ecosystem of Quintana Roo is vast, and coral reefs can be found along the majority of the state's coastlines. Aquatic species include crocodiles, turtles, snakes and whale sharks. Quintana Roo is also renowned for its *cenotes*,[1] underground rivers and rich aquatic vegetation, including mangroves and *petenes*.[2] Moreover, the availability of water in Quintana Roo is ranked as high, and it is also the state with the most square kilometres of jungles in the country (CONABIO, 2021).

3.1.2. Demography

According to the latest national census (INEGI, 2020), Quintana Roo has 1,857,985 inhabitants, and 90% of the population lives in urbanised zones, while only 10% lives in rural areas. Playa del Carmen's Solidaridad municipality is the state's third largest after Cancún's municipality of Benito Juárez, with 333,800 inhabitants (see Figure 3).

There has been rapid population growth and urban development in Playa del Carmen, including the construction of hotels, houses, flats and shopping centres (see timelapse here: https://www.youtube.com/watch?v=n7utAiwsVNI). For instance, in 2015 there were 209,634 inhabitants, and in 2020 the population had increased to 338,800 (INEGI, 2015, 2020). In recent years, Playa del Carmen has been recognized as a city with one of the highest levels of population growth in the world (CONABIO, 2021).

---

[1] *Cenotes* are deep natural wells characteristic of the Mayan riviera.
[2] *Petenes* are complex small island habitats of varied vegetation.
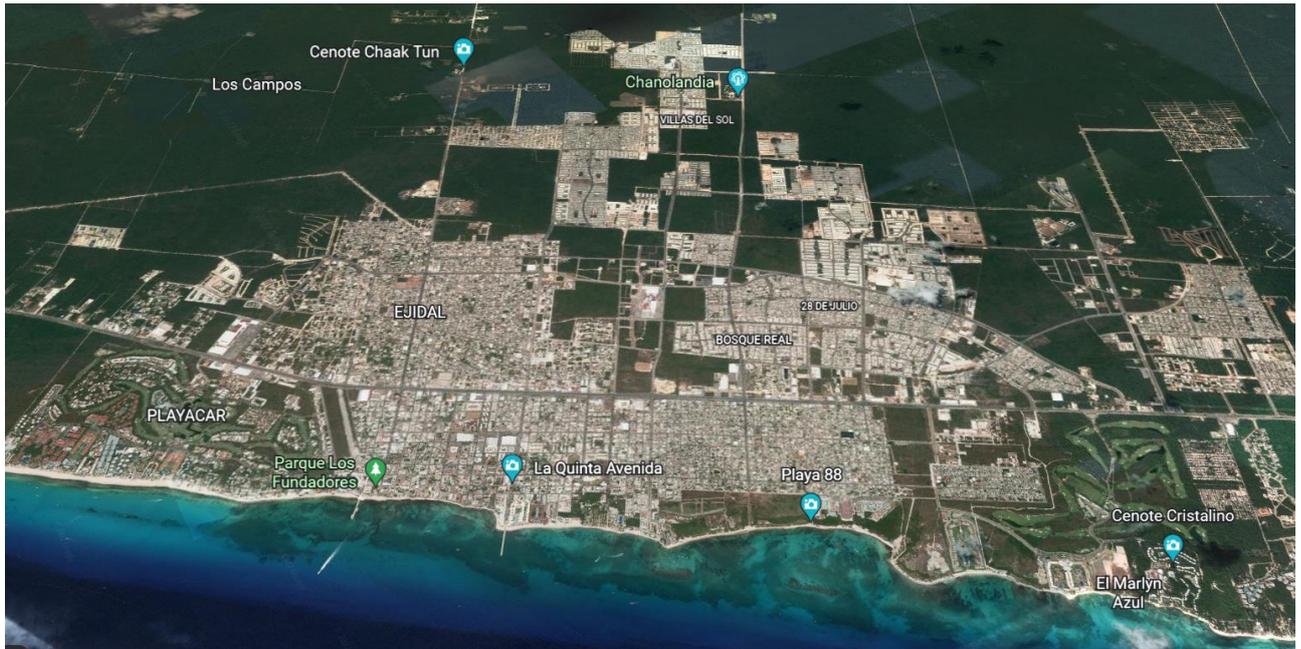
Figure 3. Closer aerial view of Playa del Carmen

3.1.3. Tourism: The Main Economic Activity in Quintana Roo

Quintana Roo is the number one tourist destination in Mexico and, in fact, all of Latin America. As such, the most prominent industry is that of services related to tourism and most of the people living in Quintana Roo work in hotels or restaurants (INEGI, 2021).

Tourism is the clear and central driving force of Quintana Roo's economic growth. In 2019, Quintana Roo generated more employment than any other Mexican state, and it boasted the third highest level of economic growth in the country (Quintana Roo Government, n.d.). The unemployment rate in the state is relatively low at 2.9%, compared to the 3.6% national average (Data Mexico, n.d.; INEGI, 2019). As a result, Quintana Roo has also become one of the most attractive destinations for nationals looking for better job opportunities: It has a very high percentage of immigration, and more than half of its population is not native of the state (Quintana Roo Government, n.d.). The number of expatriates living in Quintana Roo is also one of the highest in the country: It is estimated that each year around one thousand expatriates move to Quintana Roo (Fernandez et al., 2019).

3.1.4. Living Conditions in Playa del Carmen: Inequalities and Socio-spatial Segregation

The access to green areas and the use of public space is often associated with environmentally friendly cities, which in turn is also linked to aspects such as wellbeing as well as physical and mental health. The use of these spaces can be an indicator of how people construct ideas about the natural and built environment and how these are associated to different discourses about the environment.

In the case of Playa del Carmen, natural spaces such as the beach and the jungle are the main attractions for tourists and, therefore, are often linked to the region's economic and social development. The affluence of tourists and immigration, while creating a multicultural environment, has also evidenced economic inequalities, contrasting life conditions and lifestyles. Far from enhancing the interaction between different sectors of the population, the type of development driven by tourism "has generated a constant process of socio-spatial segregation", where proximity to natural spaces such as the beach or the jungle gain economic value and are thus reserved for numerically limited exclusive segments of the population who can afford it (Castillo-Pavón & Méndez-Ramirez, 2017, p. 103). Access to spaces such as beaches and jungles become synonymous with class privilege, exclusivity and wealth (Albarrán-Sollerio & Osorio-García, 2020).

In places like Playa del Carmen, the tourism sector and private foreign investment have taken over the beachfronts and displaced local populations to the periphery of the city. Urban development unveils a marked distinction between locals versus tourists and expatriates. Most Mexican residents in Playa del Carmen tend to live in places that are not only further away from the beach but have fewer (public) services and poor infrastructure; these locales are also visibly less attractive and generally less safe (Albarrán-Sollerio & Osorio-García, 2020; Castillo-Pavón & Méndez-Ramirez, 2017). Playa del Carmen, like other touristic places in Quintana Roo, has been described as an example of a capitalist model in which international and wealthy sectors of the population are prioritized over the local population (Brown, 2013; Camacho-Lomelí, 2015). For instance, although the Mexican constitution states that beaches cannot be private property and that access to beaches should be allowed to all the population, it is a common practice for hotels to block entrances to beaches and/or restrict the places where non-guests can lay.

3.1.5. Environmental Degradation and the Marketization of Nature

The tourism sector and the type of development it has triggered have also posed serious threats to the environment, causing ecological distress and social problems (Albarrán-Sollerio & Osorio-García, 2020). In Playa del Carmen, the rapid population growth has surpassed the capacity to provide proper services for the population, such as housing, paving, waste collection and management. These stresses and demands on municipal services have evidenced the privileges and prioritisation given to economic growth and tourist infrastructure (Camacho-Lomelí, 2015).

Another associated problem in the area is environmental degradation. In 1993, the development plan of the state of Quintana Roo proposed that tourism should incorporate a view of conservation. Tourism in Playa del Carmen was initially conceived as an experience that could offer closer contact with nature (Albarrán-Sollerio & Osorio-García, 2020). Nevertheless, since the late 1980s, a neoliberal capitalist model has prevailed in which flora, fauna and natural spaces are seen as economic resources to be exploited for profit (Brown, 2013; Castillo-Pavón & Mendez-Ramirez, 2017). In this vein, many authors refer to the notion of *neoliberalization of nature* to explain how natural resources enter the free market and become a commodity of business (Castree, 2008; Mansfield, 2004; McCarthy and Prudham, 2004). They are given a monetary value, and they become a mere commodity (Ávila-Garcia & Luna-Sánchez, 2012).

This approach has resulted in an abundance of businesses, real estate companies, hotels and tourist complexes that, using the discourse of the eco-tourism, sell the idea of being surrounded by wildlife and caring for the environment. Yet, ironically, to construct these buildings, huge amounts of land had to be destroyed, trees cut down and wildlife removed from its natural environment—all without taking real responsibility for restoring or compensating for the damage caused (Ávila-Garcia & Luna-Sánchez, 2012). As a result of this rapid urban development, one of the major environmental impacts and concerns is deforestation and the loss of flora and fauna, many of which are endemic to the region. In the following section, I briefly discuss this and some of the other main environmental problems in Quintana Roo and Playa del Carmen.

3.2. Main Environmental Problems in the Region

EE, in its broadest sense, is concerned not only with spending time in nature or learning scientific facts about it but also with recognising and forming a critical perspective about the socioenvironmental problems that jeopardise life on Earth.

Identifying the principal environmental concerns in Quintana Roo is important to gain an understanding of the context of the responses and anecdotes of the participants in the present study. Two important aspects to bear in mind are that coastal cities like Playa del Carmen face different socioenvironmental pressures from inner cities in Mexico; likewise, being a relatively new city means that it is still developing, and it is common to find unpaved roads or vacant lots scattered throughout the city.

Next, I present and detail some of the main environmental concerns in Quintana Roo: deforestation, overconsumption, littering and lack of appropriate waste management. It is important to note, however, that these issues do not occur in isolation, but rather they manifest in a cyclical pattern of cause and consequence of each other.

3.2.1. Deforestation

Deforestation is a current environmental problem throughout the Yucatán Peninsula, and the rate of deforestation in Quintana Roo is particularly worrying. The main causes are the use of land for livestock, fires, agroindustry and tourism development (Alonso-Velasco, & Velasquez-Torres, 2019; Madrid-Zubirán, Galeana-Pizaña & Navarro-Duarte, 2021).

Most of the vegetation along the Caribbean coast has been severely impacted by urban development and tourism. From 2000 to 2018, the number of hotel rooms in Quintana Roo increased by 269%, and the tourist infrastructure that accompanied this expansion has primarily occurred in areas that were initially covered by jungle and mangroves. On average, 1,882 hectares of forest vegetation are lost annually because of tourist infrastructure in Quintana Roo (Madrid-Zubirán, Galeana-Pizaña & Navarro-Duarte, 2021).

Forests play a key role in healthy ecosystems and survival, and forest loss is a serious problem around the world, as well. The UN environmental programme

highlights that together with agriculture and other land use changes, deforestation accounts for approximately 25% of global greenhouse gas emissions. Additionally, deforestation and land degradation hinder efforts to develop climate resilience and threaten forest-dwelling communities.

3.2.2. Overconsumption, Littering and Poor Waste Management

Linked to wicked problems around economic expansion, rapid urban development and tourism, another trend—and major problem—is the overconsumption of goods and the amount of waste that these generate, particularly plastics. This situation, however, is not exclusive to the state of Quintana Roo, but rather a national and global problem. Mexico is the second highest consumer of plastic bottles in the world. It is also the country that generates the largest amount of waste in Latin America (Banco Mundial, 2018). Aggravating this situation even further is the reality that waste management regulations in Mexico are inadequate and insufficient, resulting in a very low percentage of waste being recycled in the country. In fact, Mexico has one of the lowest recycling rates in the world: in 2017 it was reported that only 9.63% of waste was recycled, while 78.5% went to landfills (SEMARNAT, 2017). More recent studies, however, report that recycling rate to be as low as 5% (Griffin & Karasik, 2022).

In Mexico, the most common practice is simply to toss all the waste into the same bin and wait for the collection truck to carry it off. Waste collection in Mexico is regulated by the local, rather than the federal, government, resulting in a system in which each municipality exercises their own set of standards and practices. Finally, even while the waste collection rate in the country is high, most of this waste is inadequately disposed of in unregulated landfills (Ziörjen, 2019). In Playa del Carmen, like in most parts of the country, there is no system to classify and collect waste as such. It is up to each household to separate their waste; however, this by no means guarantees that it will be recycled, as the municipal services simply transport the rubbish to a designated landfill, where scavengers start the process of separation and classification.

Related to this topic of inappropriate waste management, littering is one of the most common and visible environmentally harmful practices in Mexico. Littering produces

pollution of air, land and water that can cause physical and chemical damage to the ecosystem, human beings and other living beings. Moreover, littering damages the image of a place and it also increases the risk of unwanted fires.

In Quintana Roo, there have been attempts to regulate and reduce littering by encouraging recycling. At the time when this study was conducted there were only two programmes in Playa del Carmen that encouraged people to bring their recyclable items to a specific location on a given date. Despite the good intentions of these programmes, they have several limitations. For instance, the fact that people have to *bring* recyclable items to a specific location, often by driving, means that the service is not accessible to the whole of the city's population. Furthermore, the infrequency and geographic scarcity of the programme also limits the opportunities to take part in it.

Littering and plastic pollution is also associated with tourism. Álvarez-Zeferino et al. (2020) highlight that while tourism generates 8.5% of Mexico's GDP, many beaches in the country are polluted with microplastics. Within the tourism sector, some hotels have opted to follow certain policies to reduce the amount of waste and energy consumption. These policies are often based on quality standards recognised by international private companies or organisations and include aspects such as reducing the prevalence of single-use plastics, reducing electricity and water consumption, classifying waste, reusing and recycling. Within the tourism sector, these standards are often seen as a synonym of quality and corporate responsibility that affords these businesses to label themselves "eco-friendly", alluding to the term ecology or ecological, which is often used as a synonym of being environmentally-friendly.

These initiatives—paired with their attractive marketing potentials—evidence that recycling, waste classification and appropriate waste management are not regular practices. The State has not assumed accountability of this duty, and, therefore, waste management is seen as an optional and admirable individual and/or corporate endeavour rather than a key imperative of responsible governance.

Thus far in this review, I have described the main characteristics of Mexico, and in particular Quintana Roo and Playa del Carmen, the city where this study took place. I have explained how tourism, as the region's main economic activity, has posed

tensions at both the environmental and social levels. These problems include deforestation, overconsumption, littering and pollution. Furthermore, the rapid population growth of the area, also driven by tourism, has produced escalating demands for public services. Combined with limited options for citizens to adopt more recycling practices as well as weak environmental regulations and poor adherence to the same, this has led to a situation in which the area's increasing economic growth is contributing to serious levels of environmental degradation.

In this chapter I have also aimed to lay bare the pressures and impact that such activities have on the environmental and social aspects of development. In the next section, I move to explain how the education system is organised in Mexico and provide an outline of preschool provisions, types of services as well as the main aspects of said system.

3.3. Basic Education in Mexico

Since this study is concerned with formal EE at the preschool level in Mexico, it is essential to understand how the same is organised as well as how it relates to other levels of education. The organisation and provision of preschool education varies from one country to another, a fact which in turn engenders differences in terms of the organisation and the structure of various systems and their accessibility and affordability.

In Mexico, the educational system is organised in four main levels: initial education, basic education, upper-secondary education and higher education. Preschool is part of the basic education level, a term which encompasses preschool, primary and secondary school as a combined educational level differentiated by age groups. Preschool education in Mexico includes children aged 3 to 5, and it is organised into three age groups often called grades (see

Table *3*). The education provided to children aged 0 to 2 is called initial education level, and it is not part of the basic education system.

There are three modalities, or types of public preschool services, offered in the country: general, indigenous and communitarian. General preschool is the most

common and provides education for the majority of the population. These general preschools are commonly organised by grades, according to children's ages (see Table *4*). Notably, there are also mixed-aged classes, known as multigrade,[3] common in rural or low-income areas (SEP, 2017).

Education System in Mexico																	
		basic education (compulsory)												Non-compulsory			
Level:	Initial	Preschool			Primary						Secondary			Upper secondary			HE
Grade:	N/A	1st	2nd	3rd	1st	2nd	3°	4th	5th	6th	1st	2nd	3°	1st	2nd	3°	N/A
Age:	0-2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	N/A

ECEC

Table 3. Organisation of the general Education System in Mexico

3.3.1. Preschool in the basic education System in Mexico

In Mexico, most preschool education provisions are regulated by the Ministry of Education (SEP, by its acronym in Spanish[4]). SEP is a federal public institution that focuses on providing quality education for the population; in each of the 32 states, there is a sub-ministry of education in charge of overseeing the functioning of the preschools (SEP, 2015).

Young children were not at the centre of attention of educational policies and formal education in Mexico until recently, when preschool was fully incorporated into the basic education system in 2004 as part of the Integral Reform of basic education (RIEB, by its acronym in Spanish). This reform restructured the whole basic education system at both the administrative and pedagogical levels in many ways: It integrated preschool, primary and secondary education as a continuum with shared pedagogical principles and outcomes, it established a new integrated curriculum and syllabus for basic education and it proposed a new pedagogical approach (SEP,

---

[3] *multigrado* in Spanish
[4] *Secretaría de Educación Pública* (SEP)

2011b). Additionally, it made preschool mandatory (SEP, 2004). This compulsory status meant that the government assumed the obligation to provide quality education to all 3-to-5-year-old children in the country. Likewise, the reform stipulated that parents should enrol their children in preschool and assume accountability.

3.3.2. Preschool Provisions and Types of Services

In Mexico, preschool education is offered by institutions in both the public and private sectors. Public education is free and secular and most preschools in the country are public. Recent statistics suggest that upwards of 80% of children enrol in public preschools (INEE, 2018). General preschools are the most common modality or type of service with 62,541 schools around the country, followed by communitarian with 18,079 schools, while indigenous preschools are less common as there are only 9,826 schools (Gallegos & Tinajero, 2022).

Public preschools are funded by the federal government, but there are also other governmental institutions that offer this service, such as the Secretary of Social Development (SEDESOL, by its acronym in Spanish[5]); the social security institutes (IMSS and ISSSTE, by their acronyms in Spanish[6]); the National Council for Educational Promotion (CONAFE, by its acronym in Spanish[7]); and the National System for Integral Family Development (SNDIF or DIF, by its acronym in Spanish[8]). Each of these governmental entities has its own unique organisational structure and institutional aims. Private preschools are privately funded and managed but still regulated by SEP. There are also a few independent preschools that operate mainly in the periphery of the formal education system and are generally privately funded and managed (see

Table *4* for a comparison).

As mentioned earlier, my study was conducted in two different preschools, one of them, which I refer to as the "City Preschool", belongs to the DIF, whereas the other,

---

[5] *Secretaría de Desarrollo Social* (SEDESOL)
[6] *Instituto Mexicano del Seguro Social* (IMSS); *Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado* (ISSSTE)
[7] *Consejo Nacional de Fomento Educativo* (CONAFE)
[8] *(Sistema Nacional para el) Desarrollo Integral de la Familia* ([SN]DIF)

the Waldorf Preschool, falls into the category of independent preschools. Therefore, it is important to briefly outline the main characteristics of this type of services, as there are some important differences between them.

Type	Ages	Fees	Funded by	Administered by	Regulated by	Follows national curriculum
Federal public preschool (general, communitarian and Indigenous)	3-6	Free	Federal government	State government	SEP	Yes
DIF- Child Development Centres	0-6	Can charge a small fee	State government	State government	SEP/DIF	Yes
Private preschools	3-6 or 3-7	Charges fees	Private sector	Private sector	SEP	Yes
Private independent preschool	age varies	Charges high fees	Private sector	Private sector	Private sector	No

Table 4. Types of preschool services in Mexico and their characteristics

DIF: Child Development Centres

DIF is a decentralised public institution charged with coordinating the System of Social Assistance and, as such, one of its main goals is the promotion of children's rights, including their education and care. DIF offers education for children under 6 years of age (i.e., initial and preschool education). This service is commonly called CENDI, by its acronym in Spanish,[9] an abbreviation for Child Development Centre, although the name might vary depending on the state where the service is located.

The DIF in the states is managed and funded by the state and municipal governments, rather than the federal government. In comparison with public preschools, DIF centres have more autonomy to manage their services, including the pedagogical approaches they choose to follow, the staff they hire, the child-staff ratio and the facilities. This also means that DIF childhood centres might charge fees,

---

[9] *Centro de Desarrollo Infantil* (CENDI)

whereas public preschools cannot. Nevertheless, both public preschools and DIF centres must follow SEP guidelines and the national curriculum to be recognised as formal education institutions with official validity.

Private preschools

Private schools are self-funded and privately managed; nevertheless, to be recognised as official, private preschools must conform to the SEP regulations, including adhering to the national curriculum. In Mexico, there are striking differences between public and private education services. Private services charge fees and often offer better facilities; fees must be covered by parents or guardians, and sometimes parents can apply for a discount or scholarship, although this depends entirely on the school administrators.

The child-staff ratio tends to be lower in private preschools: Generally, each class has one teacher and one assistant teacher, whereas in public schools assistant teachers are not common, and classes can be as big as one teacher per 30 children in a classroom (SEP, 2010). Teachers' salaries in the private sector are variable and are set by the administrators of each organisation, whereas in the public sector salaries are established by SEP. Nevertheless, in both instances, salaries for ECE teachers tend to be low. It is important to note that only 16.4% of preschools in Mexico are private (INEE, 2018)

Private independent preschools

These are quite uncommon in the country and include home-schooling groups or other ECEC centres that have their own curriculum and pedagogical principles. Independent preschools provide education to young children, commonly up to 7 years of age, but do not adhere to SEP policies and guidelines nor its national curriculum. Not being part of the formal Mexican education system conformed by SEP means that these preschools can still offer education, but this will not be legally recognised by the national basic education system. Instead, children who attend this type of service can apply for a primary education certificate from the National Institute of Adult Education (INEA, by its acronym in Spanish[10]) upon turning 10 years of age, or they might apply for an international certification if applicable.

---

[10] *Instituto Nacional para la Educación de los Adultos* (INEA)

Independent preschools are commonly privately funded and managed. Although they do not receive any public funds, they may obtain funds, training and/or support from international organisations and the civil society rather than the Mexican government. Similar to private preschools, child-staff ratios tend to be low and fees are commonly high, even more so than those of private preschools.

Having described in general terms the economic, social and educational systems in Mexico, in the next section I provide an exploration of the bases and the trajectory of EE in the country.

3.4. An Overview of EE in Mexico

Here, I explore the characteristics and development of EE in Mexico by looking at some of the most prominent debates and policies that have shaped the field—and continue to do so. I start by addressing the conceptual debates around the notions of EE and ESD and how these are rooted in historical traditions, finally I present a profile of EE in Mexico.

3.4.1. Conceptual Debates in Context: EE or ESD

The multiplicity of meanings and links between EE and other terms, such as ESD and EfS, are influenced by the way these concepts emerged and evolved in their given contexts (Pavlova, 2011, 2012; UNESCO, 2012b). Within the Western world, EE was initially constructed with the vision of solving the environmental problems of the industrialised world, an approach that presents the environmental crisis as merely an ecological problem, without addressing its pedagogical, social or economic dimensions (González-Gaudiano & Foladori, 2001). This view of EE began to be commonly associated with the specific aim of teaching knowledge about the natural world, which shows the influence of naturalistic discourses. This narrow conceptualisation of EE resulted in its framing as a mere component of ESD. When the term ESD started to gain popularity—and was even presented as an improved version of EE—, the implication was that it would ultimately replace the latter term (Pace, 2010).

ESD is currently widely used among international organisations, such as the UN and UNESCO, and tends to be aligned with the idea of the three pillars of development, which highlight the interdependence of the social, economic and environmental aspects of life. Nevertheless, in the Latin American context, ESD is still an unfamiliar and often misunderstood term among educators (González-Gaudiano, 2003; Rosales, 2009). At the same time, it has also been critiqued, and to some extent rejected, by the region's scholars (Barraza, 2003; González-Gaudiano, 2003, 2006).

Barraza (2003), for instance, contends that the term ESD and the emphasis it places on global notions of the environment, education and development brings about political tensions between the North and South. This conflict is associated with the totalising views of development that not only prioritise economic growth but also attempt to impose specific lifestyles and models of development based on anthropocentric views of human progress and domination (Jickling, 2000; Kahn & Friedman, 1995; Palmer, 1998; Sauvé, 1998; Shiva, 2006; Sterling, 2004). Linked to this critique, is the concern that the term development has been taken over by big corporations and now depicts the idea of growth and expansion funded in Western ideologies of progress, often associated with greenwashing practices[11](Jickling & Wals, 2012).

Given the controversies surrounding the term 'development', many academics and governmental institutions in Mexico have chosen to avoid using the term 'sustainable development' altogether (Peza-Hernández, 2013; SEMARNAT, 2006). For instance, the Ministry of the Environment and National Resources (SEMARNAT, by its acronym in Spanish[12]) argues that because Mexico is not at the same stage of political and economic development as Western nations, adopting standardised and normative notions of sustainable development would be unsuitable.

Overall, the most used terms in Mexico are 'EE' and 'EE for Sustainability'. But still, many different versions or approaches to EE exist, each responding to particular ideologies, disciplines or educational paradigms (Scott, 1999). In turn, each of these

---

[11] Greenwashing refers to "the act of misleading consumers regarding the environmental practices of an organisation (firm-level) or the environmental benefits of a product or service (product/service-level)" (Freitas Netto, 2020. p. 7).
[12] *Secretaría de Medio Ambiente y Recursos Naturales* (SEMARNAT)

has been fundamentally influenced by their specific historical, social, cultural and economic contexts (González-Gaudiano & Foladori, 2001).

The reluctance to use the term 'ESD' therefore is tied to cultural and historical aspects which reflect a distinctive way of embracing EE, which seems to be, at least in theory, broad and critical. The debates around these two terms could generate not only a disconnection between the two concepts and their overall aims but also some degree of confusion and unawareness about what precisely sustainability is and how it relates to education in the broader sense in the Mexican context.

Having addressed the main debates around EE and ESD, I now move to a more specific profile of EE in Mexico. Such a description is intended to delineate the main characteristics and development of EE in the formal education system in the country.

3.4.2. A Profile of EE in Mexico

To construct this profile, I draw on policy documents, reports of the state of EE in Mexico, as well as literature of EE in the field, which mainly comes from research conducted on primary school level.

To start with, it must be said that EE in Mexico has been present in the national political agenda since the early 1980s. Since then, the government has promoted a series of policies as well as the creation of various institutions aimed at fomenting EE within the distinct levels of formal education in the country. The 1990s, in particular, marked the start of an important stage for the incorporation of EE topics into the basic education curricula as the government began to promote two main aspects: one oriented towards environmental values and attitudes and the other focused on knowledge about environmental issues (Zurita, Serrano & Tovar, 1990).

The official incorporation of EE into the basic education system in Mexico can be traced back to the 1993 Educational Reform and the National Program for Educational Modernization (1989-1994). By these two means, the incorporation of environmental content was structured along three central axes: 1) environmental problems; 2) alternatives to prevent and reduce these; and 3) values for a more harmonious social coexistence. The values of mutual respect, responsibility, fairness and working together were underscored as some of the most important ones in this

process (Poder Ejecutivo Federal & SEP,1989). In 1993, a new General Education law established that one of the aims of Mexican education should be to generate awareness of the need to make responsible use of natural resources and the importance of environmental protection. In that same year a new program for basic education and set of textbooks were launched (DOF, 1993). The 1993 reforms marked a shift from a dominant view of education based on transmissive teaching to one centred on the child. Accordingly, a constructivist approach was formally adopted, and the content was reorganised into subjects (Terron, 2019). At this time, preschool was still not deemed mandatory, and young children were not at the centre of attention of educational policies in the country. This is an important detail to keep in mind, as it explains why and how preschool evolved in very different ways from primary school—including in terms of EE.

In Mexico, contrasting approaches to EE coexist. On the one hand, within the realms of formal education in Mexico (i.e. where SEP guidelines and the National curriculum are followed), EE programmes show a tendency to focus on nature conservation, conceptual knowledge and the natural sciences (González Gaudiano, 2003; Marcos-Iga & Shaw, 2011; Terrón, 2019). These foci are indeed consistent with the strong influence that the natural sciences, particularly biology, has had in the promotion of EE in the country (González-Gaudiano, 2000). On the other hand, since the first types of EE emerged and developed in the periphery of the formal education system, EE in the non-formal sector has been led mainly by NGOs and shows a strong link with social and communitarian projects. These are associated with social justice and human rights discourses, which reflect a strong political and activist ethos (González-Gaudiano, 2003; Marcos-Iga & Shaw, 2011). Such trends might be linked to the historical and cultural heritage of critical approaches popular in Latin America, such as liberation theology, social and community psychology and Participatory Action Research (González-Gaudiano, 2003).

The peculiar development of EE in Mexico has led to a multiplicity of understandings and interpretations that go from narrow views of EE—based on learning about the natural world—to more political and critical ones which have not been welcomed or embraced by the formal education system. González-Gaudiano (2003), a prominent Mexican scholar in the field, argues that the dominant view of EE in the country is still one based on conservationism and nature-based views, which in practice often

translates to simply knowing and distinguishing characteristics of plants, animals and natural phenomena, an approach that is common within the discourses and learning material produced and distributed by SEP. All of these characteristics indicate the prevalence of a rather narrow view of EE in the formal education system.

González-Gaudiano (2007) contends that the following features of the educational system(s) in Mexico and Latin America have constrained the operation of broader approaches to EE in schools: inflexibility, a closed structure, a curriculum based on disciplinary work, teachers' lack of interest in adopting new perspectives, poor governmental investment, excessive teacher workloads and a lack of quality resources, among others. Typically, the panorama of EE in the country is one that frames EE as a means to solve socio-environmental problems within the framework of the natural sciences, even though environmental problems have long been known to exceed the limits of positivistic science (González-Gaudiano,1994; Terrón, 2019).

Echoing González-Gaudiano (2007), Barraza (2001) agrees that the predominant approach in Mexican primary schools aligns with the notion of education about the environment, which places a strong emphasis on transmissive educational perspectives. Similarly, Terrón (2019) claims that EE and environmental issues writ large have been dealt with only superficially in formal education and that recognising these as *merely* environmental problems crucially ignores their vital social, political and economic dimensions. Moreover, Terrón et al. (2016) also highlight the fact that EE-related content is frequently isolated in curricular subjects and that this, along with the oversimplification of environmental problems as solely ecological issues, remedial views of wicked issues and decontextualized daily practices, does not contribute to the critical and complex education that our times demand.

Many of the issues surrounding the poor and narrow interpretations and practice of EE at the basic education level appear to be related to the curriculum and the pedagogical principles that, despite constant changes, remain in place. For Terrón (2017), the positivistic approach that underpins the curriculum describes a dispersed, disconnected and mechanical view of teaching and learning that is not intended to help students develop a critical understanding of the world. Furthermore, this reductionist view of EE and pedagogy within the formal education system appears to be rooted in national policy discourse (e.g. the General Education Law and the

National Development Plan, which limit EE to the ecological arena). This discourse has been reproduced through the educational reforms, and it has also impacted teacher training programmes, including what and how it is taught (Terron, 2017).

Another main concern around EE in Mexico is precisely the lack of teacher training, not only with regards to EE, but in general: Teachers tend to show poor understanding of pedagogical principles and the curriculum (Benavides-Lahnstein, 2017; González- Gaudiano, 2007; Paredes Chi & Viga-de Alva, 2018). According to Mexican scholars who have conducted studies on EE in the primary school curriculum, there is a lack of methodological and pedagogical guidelines for teachers to implement EE effectively (Paredes-Chi & Viga-de Alva, 2017; Peza-Hernández, 2013).

This difficulty to engage and learn more about EE might also be connected to the numerous policy initiatives that constantly make changes to the curriculum and its underlying pedagogical principles. The denomination 'short-termism' becomes relevant here as educational policies are often embedded in political interests that result in flash changes and modifications to the educational system, almost always corresponding more to political parties' interests than to the needs of students and teachers. As such, the introduction of new concepts and guidelines often ends up confounding teachers and adding more pressure and undue complexity to their already excessive workloads.

According to Paredes and Viga-de Alva (2017) and Peza-Hernández (2013), there is a lack of methodological and pedagogical guidelines for teachers to implement EE. A further issue identified is the gap between EE theory and curricula—as well as between EE curricula and practice in Mexico (Benavides-Lahnstein & Ryder, 2020; Paredes Chi & Viga-de Alva, 2018). Indeed, this is a tendency that has also been observed in relation to EE internationally (Palmer, 1998; Stevenson & Baker, 1987).

In this section, I have discussed some of the main features of the field of EE in Mexico and highlighted the prevalence of narrow views of EE which align with the view of education about the environment and show a strong influence from positivistic paradigms of the natural sciences. I have also presented some of the common flaws and issues that have been identified in the arena of EE in the country, which span from the policy level, including the reproduction of simplistic

understandings of the environment to problems related to the lack of sufficient and effective teacher training. In the next section, I focus specifically on EE at the preschool level in Mexico by reviewing the different guidelines and curricula.

3.5. EE in the Preschool Curricula in Mexico: Theoretical Underpinnings and Pedagogical Principles

This is the final section in this third chapter on the Mexican context. Here, I present a historical review of preschool curricula in Mexico. As it was previously stated, research on EE that focuses on preschool level specifically is scarce in Mexico. Consequently, examining how EE at the preschool level has been tackled within the curricula over the years is an alternative way to understand its evolution and shed light on the pedagogical approaches and discourses that have dominated the field.

In Mexico, the National Curriculum, as well as its accompanying study programmes, are documents designed, created, published and distributed free of charge by the SEP to schools and students throughout the country. There are specific textbooks and study programmes for each grade, from preschool to secondary school.

There have been several preschool guidelines and curricula over the years, but it was not until 2004 that the curriculum at the preschool level gained a national status and became mandatory. This means that since this time teachers and administrators are expected to use the National Curriculum and Study Programme on a regular basis. Parents can also consult these documents to learn more about the educational system and its guiding principles. SEP requires teachers to familiarise themselves with the National Curriculum and Study Programme, as these documents serve as guidelines for classroom practise. Nevertheless, teachers can decide when and how to use these, as preschools have their own internal agendas and the option to include other pedagogical approaches if they wish.

The review of the preschool curricula in Mexico that I present below focuses on, firstly, identifying the pedagogical models or orientations that have informed the same and, secondly, on how EE has been addressed. Table 5 summarises the different curricula and their main theoretical and pedagogical orientations.

Preschool curricula in Mexico	
Curricula (per year of publication)	**Theoretical underpinnings & pedagogical principles**
Circa 1900s to 1970s	**Inspired by Froebel's kindergarten model** - emphasis on natural upbringing, care and protection - non-academic
1979	**Developmental psychology** - influenced by Montessori and Decroly - emphasis on playing and learning - input from behavioural sciences and medical models of development
1981	**Psychogenetic and constructivism** - strong influence from Piaget's theories - emphasis on cognitive and biological stages of development - preschool as the foundation for primary school
1992 (decentralisation of Education Agreement - ANMEB)	**Project-based** - inspired by Dewey, Kilpatrick and Malaguzzi - Progressive (new school movement) - experiential and inquiry-based learning, meaningful learning and collective work - holistic view of the child
2004 (preschool becomes mandatory)	**Competencies and quality of education** - importance of sociocultural context - emphasis on assessment - human rights informed
2011 (preschool becomes part of the basic education system)	**Competencies for life** - learning outcomes & standardisation - formative fields
2017 (new educational model reform)	**Key learnings** - academic fields - social & personal development - curricular autonomy

Table 5. Preschool curricula in Mexico

3.5.1. The Kindergarten Model and Froebel in Mexico: The First Preschool Guidelines

Long before the reforms of 1993, preschool education in Mexico was already strongly influenced by child-centred pedagogies, particularly from European pedagogues, such as Froebel and Montessori. These figures gave special attention to the relationship of young children with nature. In Mexico, the first centre for preschool-aged children (i.e. preschool) was opened in 1883 as an independent school that aimed to provide a 'different' type of education for the early years of life. By 1900, these centres began to be known as 'kindergartens', a term rooted in the

German language. In turn, this label was later translated into Spanish as *jardín de niños*[13], and it is still a widely used expression today. These first preschools in the country were informed by the pedagogical ideas of Froebel and stressed the relevance of a special type of education that focused specifically on young children (SEP & OECD, 2003; Zapata, 1951). In light of the widespread agreement that the kindergarten approach was best for young children, the Mexican Ministry of Education sent a group of educators to study the Froebel method abroad and then implement it in the country.

Frobel's ideas were thus interpreted and subsequently applied by Mexican education practitioners, becoming so popular that they were used as the basis for the first Kinderten guidelines in Mexico that started to circulate around 1903 and 1904. These guidelines included aspects such as play and the study of nature, which incorporated direct observation of the different seasons and elements in the sky, taking care of domestic animals, direct observation of certain insects, planting, transplanting, watering and cultivating plants, naming flowers and fruits and collecting shells and seeds (Liddiard Cárdenas & Pérez Piñón, 2019; López & Chanes, 1965).

However, these guidelines were later analysed and critiqued, arguing that even when these were supposed to follow Froebel's method, the content did not always reflect the key principles of the kindergarten model and instead tended to reproduce the idea of education as instruction. Furthermore, López and Chanes (1965) argued that the activities suggested by the guidelines were not appropriate for young children and did not take into account children's biological and psychological development. Furthermore, some of the activities proposed by these guidelines were seen as unfeasible or impractical. In that sense, the overall criticism was that even when children's play, freedom, autonomy and interests were supposed to be central for preschool-aged children, in practice, many Mexican preschools ended up falling into teacher-led models that encouraged practices such as imitation and repetition.

Despite the popularity of the Froebelian approach, in the 1960s there was a slight shift in the pedagogical ideas and trends in Mexico, and new guidelines were published. These showed the influence of other pedagogues, like Montessori or

---

[13] In English, literally 'garden of children'.

Decroly, who like Froebel stressed the importance of play and the natural world for young children (SEP-OCDE, 2003). However, Montessori and Decroly had a more medical and scientific orientation that focused on sensorial and cognitive development with a strong emphasis on 'normal' versus 'abnormal' child development (Villaroel, 2015).

3.5.2. The Influence of Developmental Psychology and Psychogenetic Theories: The 1979 and 1981 Preschool Programmes

In 1979 a new preschool programme was published. It showed greater input from developmental theories and behavioural approaches. For example, one of its aims was to ensure the normal and healthy development of the young child. Teaching was oriented towards preparing children for primary school and ensuring that they had the knowledge and skills needed. This program, like its predecessors, took as the basis of its organisation the "maturative needs" of the students (SEP-OCDE, 2003). It was comprised of four areas of development: emotional-social, cognitive, language and motor.

In 1981, a different version of the preschool programme was launched. In this new iteration, there was a clearer emphasis on stages of development and childhood milestones that showed the influence of psychogenetic and developmental psychology theories founded mainly on Jean Piaget's work (Dirección General de Educación Preescolar, 1981). At the same time that the ideas of Piaget became dominant, the emphasis given to cognitive development, literacy and numeracy also gained notable relevance, displacing other aspects such as play and care (Ferreiro & Taberosky, 2005). In this sense, the way of approaching topics related to EE moved from promoting love, connection and experience with nature to an intellectual, rational and scientific approach.

The 1981 preschool guidelines had few references to EE, which possibly relates to the influence of Piagetian theories that placed children as incapable of dealing with complex environmental topics requiring moral judgement or abstract thinking. There was also little consideration of the social and cultural dimensions of education, hence the focus on learning and development from a more cognitive and academic perspective (Chamizo, 1990). The psychogenetic and cognitive framing of the

curriculum appears as a dominant discourse that could have limited the way EE and environmental problems were understood and tackled, as environmental topics were only mentioned as isolated content.

3.5.3. The Modern School and Project-Based Learning: The 1992 Preschool Programme

Ahead of the arrangements for the National Agreement for the Modernisation of basic education (ANMEB), the government conducted a national consultation in 1992. This revealed that overall, and despite the attempt to move away from the so-called traditional models of education, the predominant view of education was still one based on memorisation and 'knowing about' the environment. Correspondingly, EE topics were addressed as natural phenomena, without linking them to the social or economic dimension of life. Moreover, the report also argued that there was a lack of environmental knowledge and awareness among students and teachers (Terrón, 2019). This same year, the federal government, in collaboration with SEP, transferred basic education services as well as initial and in-service teacher training to state governments as a strategy to decentralise educational services.

Within this scenario, in 1992 another preschool programme was published. This curriculum adopted a totalising or integral approach to education that attempted to overcome the view of learning centred on intellectual and psychological development. On the one hand, it proposed to focus on praxis and, on the other, to recognise that children's development is nevertheless complex. That is, children's development includes different dimensions: from cognitive, emotional and physical development to relationships as well as the social context and the family. Each of these elements are intertwined and are crucial for children's overall wellbeing and development. Play and learning were also presented as important and inseparable aspects of children's development (SEP, 1992).

The 1992 preschool programme, although it did not dismiss developmentally driven orientations, was influenced by more progressive approaches of education and incorporated the views of authors like Dewey and Kilpatrick. Indeed, one of the supplementary learning materials of the curriculum has a quote from Malaguzzi about the child as a whole person with both biological and cultural needs.

The aim of preschool education as stated in the official curriculum and learning materials was not to transmit content (i.e., objective facts and knowledge) but to develop people's potential (SEP, 1992b). The curriculum proposed teaching methods based on experiential and enquiry-based learning, meaningful learning and collective work; the entire curriculum was organised around the idea of projects. This means that rather than having subjects or pre-established topics, teachers had to design a project that is of interest to both the teacher and the children. Importantly, it was expected that teachers be flexible enough to adapt or modify the course of the project depending on the needs and interest of the group.

In methodological terms, the globalising approach and the idea of project-based learning seemed to allow more room for exploring EE related areas. Since the curriculum was not organised into subjects, it did not provide specific content; instead, it stated that one of the characteristics within the design of a project should be the integration of the natural and social environments. The curriculum suggested a series of "games and activities in relation to nature" (SEP, 1992, p. 43). These included specific actions that were organised into four aspects: health, taking care of the school, ecology and sciences. The curriculum also had detailed examples and guidelines related to the use of materials, which included objects from nature as well as the reuse of objects. It also showed examples of the distribution and organisation of the physical space into different areas, for example construction area, quiet area, etcetera.

The learning materials provided to teachers under the 1992 preschool programme suggested changes or adaptations to certain EE-related practices. For instance, it encouraged teachers to give children chances to bond with nature in more spontaneous ways by letting them play with, feed, and look after animals. The programme also included gardening and supported having spaces for crops and inviting children to use different gardening tools. However, it warned teachers not to fall into the tendency of focusing merely on horticulture or gardening as recreative practices and, instead, encouraged the exploration of aspects related to perception and the manipulation of objects. In short, children were to take this opportunity to reflect on how the world is capable of transforming (SEP, 1992b).

3.5.4. Competences for Life: The 2004 and 2011 National Curricula for Preschool

Since 2000, the modification of educational policies and the curriculum became a constant. These changes coincided with a historical political transformation in the country, as a president from an opposition party was elected in 2000 for the first time in 70 years. In 2002, an educational reform was proposed, and, as a result, a new curriculum for the preschool level was launched in 2004 after a series of consultations.

This new preschool curriculum was based on the idea of competences for life. Here, the term competence is described as "a group of capacities that include knowledge, attitudes, abilities and skills that a person attains through diverse learning processes and that are visible through how the person acts in different situations and contexts" (SEP, 2004, p. 22). The pedagogical approach of the curriculum is more eclectic and, although it does not have direct references to particular authors, there is a clear influence of sociocultural perspectives and a more internationalised view of education. Instead of proposing a specific teaching and learning method (like the previous curriculum), it describes pedagogical principles that should guide learning and practice. Likewise, it defines the type of competences that all children are supposed to develop in each of the different areas.

EE is mainly addressed through the area in the curriculum called Exploration and Knowledge of the World, which aims to favour children's attitudes and capabilities to develop reflexive thinking through experiences that allow them to learn about the natural and social world(s).

Aspects such as observation and encouraging children to ask questions, solve problems, develop their own explanations, inferences and arguments based on their own experiences and previous knowledge are highlighted. Both contact with and conversations about the environment are seen as ideal opportunities for children to express their opinions and tell their own stories. These are regarded as opportunities to help children reflect and develop attitudes of care and protection of the natural environment (SEP, 2004).

In 2011, a new version of the curriculum was published. This was a continuation of the work initiated in 2004, as the idea of competencies for life remained central.

However, there were some important structural changes, such as its presentation as an integrated curriculum for the three levels of basic education: preschool, primary and secondary (SEP, 2011, 2011a).

In the 2011 edition of the curriculum, EE appeared throughout the three levels of education. At the preschool level, it remained within the same area (Knowledge and Exploration of the World) and kept its emphasis on observational, reflexive and enquiry-based learning—with a scientific basis. Yet, the idea of nature as a resource and children as its corresponding users and participants was stressed:

> The understanding of the natural world attained during childhood
> sensitises and encourages a reflective attitude regarding the importance
> of the proper use of natural resources and guides their participation in
> caring for the environment. (SEP, 2011, p. 62)

Here, it is important to note the view of the environment as the *natural world* as well as the emphasis on reflexivity as a feature that is necessary and expected in order to care for the environment. Moreover, caring for the environment is directly linked with learning how to make use of natural resources.

Notably the term 'EE for sustainability' is mentioned under a heading that alludes to topics of current social relevance and it is presented as a transversal theme that could be addressed at preschool level and linked to other areas of the curriculum.

3.5.5. Key Learnings and Curricular Autonomy: The 2017 New Educational Model

In 2013, the change in presidential administrations brought about a new educational reform, and yet again in 2016 another modification to the curriculum and learning materials took place. As a result, a new edition of the curriculum for basic education was published in 2017, becoming effective in 2018. This is the version of the curriculum that was in place when I conducted my fieldwork in Mexico.

The new curriculum named 'new educational model: key learnings for integral education' was presented as a joint effort to allow children, regardless of their context, to access quality education that "allows them to be happy and successful in life" (SEP, 2017, preface). Key learnings are understood here as knowledge, practices, attitudes and values that are fundamental for the integral education model

of the Twenty-first Century. This idea rests on the assumption that developing key learnings can help prevent social exclusion and inequalities in the future.

This curriculum presented major changes to both the content and the structure of the previous one. The main features of the 2017 curriculum are that:

1. It shifts from the notion of competencies for life to key learnings.
2. It is organised around three main curricular components: academic fields, areas of personal and social development and a curricular autonomy sphere. Each of these is divided into sub-fields, sub-areas and sub-spheres, respectively. The academic sub-fields are further organised into subjects, while the rest of the components are not, as they are supposed to reflect a more flexible and tailored focus.
3. Curricular autonomy assumes a predominant role and is interpreted as the imperative for schools to have the freedom to adapt their contents and pedagogical praxes according to their own regional, social and economic characteristics and interests.
4. It incorporates 'student achievement profiles', which are defined as a set of learning, skills and abilities that the students should have when they complete each of the education levels that constitute basic education (i.e. preschool, primary and secondary).
5. There is an emphasis on socioemotional development that incorporates the idea of constructing a life project.
6. It is influenced by humanist and socio-constructivist approaches as well as by cooperative and collaborative learning methods.
   (SEP, 2017).

An important characteristic of the curriculum that was considered innovative and is particularly relevant for this study is the notion of curricular autonomy. As part of the reforms started in 2013 and the notion of curricular autonomy proposed in 2017, SEP decreed that all basic education—including the preschool level—should create strategies of curricular autonomy, also known as *clubs*. These are defined as "curricular spaces that respond to the interests, abilities and needs of students" (DOF, 2018). The aim of this initiative was to give more freedom and flexibility to the formal basic education curriculum by allowing for collaborative spaces where teachers, staff, families and the whole school community may work together toward

identifying their own areas of opportunity and design (at least in part) their own curriculum (Martínez-Iñiguez et al., 2020). This new component was crucial for the creation of the botany club at the City Preschool, one of the preschools where this study was conducted.

With regards to EE, the term is still not explicitly mentioned in the preschool curriculum. However, a reference to the notion of taking care of the environment can be located within two sections of the curriculum. First, taking care of the environment appears as one of the key characteristics that children should exhibit when they finish preschool. The expected outcome here is that the child "knows and practices habits to take care of the environment (for instance, pick up and classify rubbish)" (SEP, 2017, p. 26).

This includes:

- exploring and identifying sources of water, air and soil pollution;
- investigating measures to protect the natural resources in their locality and taking part in actions to care for and protect them; and
- enjoying and appreciating natural spaces as well as available spaces for recreation and exercising outdoors.

Second, EE is mainly addressed though the sub-field called 'exploration and comprehension of the natural and social world', which is located within the Academic field. This sub-field encourages children to "show curiosity and wonder" and to "explore the immediate environment, ask questions, record data, craft simple representations and expand their knowledge of the world" (SEP, 2017, p. 26).

The main purpose, as stated in the curriculum, is to develop reflexive thinking by focusing on the actions that children can do on their own to investigate and reflect about social and natural phenomena and processes. The pedagogical approach centres on:

- offering children experiences to interact directly with objects though observation, experimentation as well as registering information;
- prompting children to make sense of what they are investigating and getting to know by inviting them to think, talk and dialogue about the same;
- promoting actions that help children develop reflective thinking and construct knowledge; and
- linking this field with health and self-care, including physical development, eating habits, personal hygiene as well as illness and risk prevention.

Overall, the 2017 curriculum espouses a view of EE that deals only with the natural environment and learning about it. There is also emphasis on practical actions or measures to take care of the environment and prevent further environmental damage. Notably, aspects such as health are incorporated as core components, and these highlight the notion of care, particularly self-care. However, the curriculum presents these aspects as separate themes, organised into a) exploration of nature, b) health care and c) environmental care, but the links among them are not always clear. The curriculum also gives some suggestions of the type of experiences children could be involved in.

Likewise, this curriculum highlights aspects related to experiential learning, reflective thinking, participation and dialogue among children, showing an image of the child as a knowledgeable and competent learner. However, the emphasis given to specific learning outcomes and predefined student profiles shows the influence of neoliberal and managerial ideologies.

With the change of president in 2018, there were structural changes aimed at reversing the 2013 education reform and the so-called New Model. In 2019, the federal government agreed to modify Article 3 of the Mexican Constitution, with the goal of changing the 2017 curriculum and its pedagogical model to one based on human rights (Martínez Iñiguez et al., 2020). As a result, in 2022 a different version of the National Curriculum was published, and it is currently in its pilot phase before being fully implemented throughout the country in [fall 2023].

The review of different preschool curricula in Mexico shows that there have been many different pedagogical influences: from Froebel's kindergarten model to the most recent idea of curricular autonomy and key learnings. It also evidences that, despite attempts to tackle transmissive models of education, there has been a tendency to focus more on approaches of education *about* the environment, which are marked by narrow views of education and passive images of childhood. Likewise, a dominant view that has persisted is that of the environment as nature as well as the tendency to frame EE as taking care of the natural environment.

3.6. Chapter Summary

This chapter has presented an overview of the Mexican context, starting with an outline of the geographical, economic and social conditions in Quintana Roo and living conditions in Playa del Carmen, the city where this study was conducted. Tourism was highlighted as the main economic activity, and aspects related to the impact it has had on the social and environmental conditions in the region were discussed. I also explained how the Mexican education system is organised, indicating that preschool education is now part of the compulsory basic level and that there are multiple manifestations of education services, such as public versus private as well as SEP-regulated versus independent. The profile of EE in the country also evinced the dominance of narrow EE approaches based on a positivistic paradigm corresponding to education *about* the environment and to a tendency to frame EE as an isolatable topic or subject. The review of EE within the preschool curricula shows the different approaches that have been adopted over the years and throughout changing curricula—as well as the concomitant attempts to overcome overly narrow views of EE. Importantly, it also made evident that EE in the formal education system is predicated on political agendas, which result in recurrent changes to pedagogical models and the curriculum. Rather than improving the conditions or the quality of education, these persistent changes often create a lack of continuity that results in ambiguity not only in terms of the aims and purpose of EE but of ECEC in general.

4. Methodology

The purpose of this chapter is to explain the methodological approach adopted to examine images of childhood and EE in Mexican preschools. I start by explaining briefly how this study is framed in ontological and epistemological terms. Next, I present the aim of the research and review the research questions. I then continue with an explanation of the qualitative approach that guided the research. In the following section I introduce the notion of doing research with children, as this perspective served to guide the research design. In the subsequent section, I explain in more detail the case study design chosen and how the two cases were selected. Next, I present the research participants and the data collection methods used. I continue with a section on data analysis and then address the ethical considerations of the study. Finally, I close the chapter with a note on the validity of the research undertaken.

4.1. Poststructuralism as an Underpinning Paradigm: Epistemological and Ontological Positioning

My research has been guided by a poststructuralist paradigm. The application of a poststructural perspective is highly pertinent in problematising the commonly accepted notions surrounding nature, children, childhood and EE within the context of preschool education because of the emphasis given to analysing why particular interpretations or discourses have come to dominate and what the implications of such discourses are in real situations. Poststructuralism enables one to scrutinise prevailing approaches to comprehending and implementing EE, thereby facilitating the envisioning of transformative alternatives that emphasise critical thinking, sustainability and social justice within preschool settings.

In line with poststructuralist thinking, I argue that truth and knowledge are fundamentally political. As a result, knowledge and what is said to be true should not be thought of as a neutral, fixed category that is only waiting to be discovered. It is possible to put it this way: "the world exists, but descriptions of it do not" (Rorty, 1989, p. 5). As a researcher, I am aware that my identification and interpretation of events are influenced by various power dynamics, prior knowledge, skills, and values that impact the way the results are presented and analysed. In this regard, it is

important to clarify that poststructuralism challenges the notion of achieving a definitive and impartial depiction of the external world rather than questioning the existence of individuals, entities, and material realities (Hanningan, 2004).

Before proceeding to the aim and research questions, it is imperative to briefly elucidate my position and the implications of my comprehension of ontology and epistemology for this investigation. On the one hand, ontology pertains to the objective existence of external reality, independent of our subjective interpretations, while epistemology encompasses the various methods by which individuals acquire knowledge about this external reality, interpret it, and ascribe it with significance and intention.

In that sense, I contend that my ways of knowing the world are always subject to a level of interpretation, which implies that "what [I] know about the world is not equal to the way the world is" (Olvitt, 2017, p. 399). This differentiation is important to avoid the epistemic fallacy (i.e., collapsing and/or narrowing down ontology into epistemology). This occurs when "ontological questions about the deep structures and mechanisms that give rise to observed events and phenomena are displaced by epistemic questions about the most robust way of measuring events/phenomena" (Tikly, 2015, p. 239). A consequence of this is that the complexity of real beings, objects, things or phenomena is reduced to a particular way of knowing. The epistemic fallacy may result in the notion that elements such as interpretations, core beliefs, discourses, or ideologies (in this case about children and childhood, nature, and EE) are deemed less significant or less legitimate due to their inability to be definitively and objectively proven or replicated (Cornell & Parker, 2010).

4.2. Aim and Research Questions

The aim of this research is to elaborate a critical analysis of how images of childhood along with distinct pedagogical models, influence the ways EE is understood and practised in Mexican preschools. The focus of the research is on investigating, to a more profound degree, how images of childhood act as mechanisms that can enable or hinder the transition toward more critical views of EE in ECEC. Moreover, attending to the call for more studies that include young children as well as inspired by the idea of preschool as a community of social actors, this study brings together

children, teachers and adults as research participants to provide a deeply contextualised critical analysis of EE in Mexican preschools. The main research question guiding this study is:

How do images of childhood and associated pedagogical models impact the ways in which EE is understood and practised in Mexican preschools?

A further set of sub-questions were elaborated in order to answer the main question:

1) How is EE tackled in two Mexican preschools with contrasting pedagogical models?
2) How do teachers understand the terms 'environment', 'EE' and 'sustainability'?
3) How do children navigate ideas regarding the environment, EE and environmental problems?
4) How do parents understand the terms 'environment', 'EE' and 'sustainability'?
5) What are the dominant images of childhood that teachers and parents hold?

Sub-questions one to four look at aspects related to EE and pedagogical models which is necessary to gather information about how EE is understood and practised in each of the preschools from the point of view of teachers, children and parents. The first sub-question explores what EE looks like in each of the preschools while the following focuses on identifying and examining the diverse understandings of EE and other key terms among teachers. The third sub-question focuses on children specifically and enquires how they construct ideas about EE and environmental problems, considering that they are enrolled in a preschool with an EE project or ethos in place. The fourth sub-question addresses parents' views of EE, and like the second, it analyses how key concepts are understood. Lastly, the final sub-question centres on identifying and analysing critically dominant images of childhood present within parents and teachers' discourses.

My research was designed using a qualitative approach (Flick, 2009; Maxwell, 2005) and was guided by the perspective of doing research with children (Christensen & James, 2000; Scott, 2000). Theoretically and conceptually, the study is framed by a poststructuralist approach, discourse analysis and the sociology of childhood. In this qualitative design, the main question is at the centre, and it acts as the guide for the research, while each sub-question serves to answer the main question as shown in Figure 4.

I used a qualitative approach for my research because in order to analyse critically discourses it is imperative to have a methodology that goes beyond mere descriptive and numeric analyses. Qualitative research seeks to investigate "the pluralization of life worlds" (Flick, 2009, p.12). It facilitates the elucidation of participants' unique perspectives, stories, beliefs, experiences and interpretations, seeking to make sense of the same (Flick, 2009; Matthews & Ross, 2010). Moreover, qualitative studies recognise subjectivity and value interpretative research techniques, two aspects which are crucial for allowing participants to express their own meanings and, by extension, for gaining insight into discourses, interactions, theories and practises in the real world.

Figure 4. Main research question and sub-questions in relation to theory and the research design

The qualitative approach I chose for my study is considered interactive, as opposed to linear. This means that its design was not a fixed protocol to be strictly followed,

but rather it was understood as a flexible and iterative reflexive process (Maxwell, 2005, 2012). Informed by this model of qualitative research, in my design, the main research question is at the core, yet it remained "sensitive and adaptable to the implications of other parts of the design" (Maxwell, 2005, p. 229). In that sense, terminology, wording and the order of the main question and sub-questions were continuously reflected upon, amended and adapted in an effort to be as sensitive as possible to the context of my study.

Parting from this theoretical foundation, there are two core premises that have guided my research: first, treating the "research design as a real entity, not simply an abstraction or plan" (Maxwell, 2005, p. 215) and, second, insisting that social phenomena need to be understood as part of specific social and cultural context(s) (Edwards, 2001; Flick, 2009). The first aspect is fundamental in envisaging research as an ongoing process of learning that needs to allow space for reflection, adaptability and improvement in order to ensure that the research responds to the actual, real circumstances in which it is interested—and, thus, that it remains relevant. This perspective was useful in guiding my research journey, particularly when negotiating access and during the data collection process, as it helped keep me open to adapting some aspects of my design to the real, changing and, sometimes, unexpected conditions I encountered. The second aspect relates to the fact that EE is a complex social phenomenon that is framed by cultural, historical and personal beliefs.

Another relevant aspect to clarify when conducting a qualitative study is that of subjectivity. This consideration in qualitative research—and particularly when using a poststructural approach—, rather than a variable to be avoided, should be fully recognised and "becomes part of the research process" (Flick, 2009, p. 16). As such, subjectivity must be recognised not only as a form of human experience and its corresponding interpretation of reality, but rather as a place of "discontinuity and conflict, central to the process of political change and the preservation of the status quo" (Weedon, 1987, p. 21). Informed by poststructural feminist theory, in this research project, I place subjectivity, power and the relationships between discourses and social practices at the centre of the analysis of knowledge construction.

Paying attention to subjective experiences and understandings among different actors is imperative for the purposes of this research. Firstly, it allows me, as a researcher, to search for plurality, complexity, contradiction and absences. Secondly, grasping and analysing these aspects is essential to problematize common assumptions, that is, to question and challenge dominant discourses about childhood and EE (Moss et al., 2000).

Another important aspect when including young children in research is to reflect on how children are positioned within the research and why. My study was informed by the perspective of doing research with children, and this approach guided the overall research design. In the next section, I discuss the principles of doing research with children before moving on to explain the research design in greater detail.

4.3. Research with Children

This dissertation seeks to affirm, both implicitly and explicitly, that children can be research participants whose voices are worth listening to. In the same vein, it also maintains that "the best source of information about issues pertinent to children is the children themselves" (Scott, 2000, p. 106). Doing research with children means that they are given a central role and are involved in activities that invite them to express and share their ideas, experiences and understandings. Such a practice commonly makes use of participatory and collaborative methods, such as field notes, group discussions or artistic techniques (drawings, photographs, models, etc.) to capture and embrace children's worldviews. The principles of doing research with children guided my research process from the initial stages and, particularly, when choosing the methods employed to collect data and manage the negotiations of data collection with gate keepers, preschool staff and children themselves.

There are other fundamental premises when doing research with children that I have adopted in my study. For one, children are not merely an idea but real people who live their daily lives within a particular socio-cultural context (Hardman, 1973; James, 1998; Qvortrup, 1994). Secondly, that "children are social actors and informants in their own right" (Hendrick, 2000, p. 38). And, lastly, children's rights have priority over the interest of the researcher (SRCD, 1990). This third and final

premise highlights the need to safeguard children's wellbeing, respect their confidentiality as well as their right to participate or not in the research. Moreover, this principle encompasses the importance of informing children about the study, which relates to ethical principles (Stanley & Sieber, 1992; Woodhead & Faulkner, 2000).

Informing children and asking for their consent to take part in the study is a fundamental aspect of this approach, which is based on the idea of respecting children's voice(s), participation and agency (Christensen & James, 2000; Green, 2015; Woodhead & Faulkner, 2000). It is important to note that valuing and respecting children does not mean removing adults from the picture, but rather understanding the differences between them and the way power relationships affect the social dynamics at play. In addition, including adults and children in the study is key to understanding the actual context in which, after all, they each coexist. In this sense, my research was guided by the premise that "we should not underestimate the importance of adult involvement, not only for the guidance they can offer, but also for the lessons they need to learn" (Hart, 1992, p. 5). These core principles guided me to construct the unique research design for this study and select its data collection methods, a description of which follows.

4.4. Exploratory Case Studies

This study consists of two case studies from two different preschools in Mexico. One is an independent Waldorf preschool and the other a semi-private preschool guided by the National Curriculum and informed by the Reggio Emilia approach. Each preschool was taken as a unit of analysis and a variety of tailored methods—including interviews and observations with children, teachers and parents—were employed to collect the data. I chose a case study design because of the emphasis that my research places on critically analysing contemporary and complex "phenomen[a] in [their] real-life context[(s)]", that is, where events, interpretations and discourses occur within a specific socio-historical context and among the interactions of myriad social actors (Yin, 2014, p. 13). Since my study looks at an underattended area of knowledge, namely EE at the preschool level in Mexico, an exploratory case study was ideal. The exploratory nature of the research means that the focus is on developing an initial understanding of the phenomena under

investigation: in this instance, the role that images of childhood and pedagogical models play on shaping different ways of understanding and practising EE at the preschool level in Mexico.

One advantage of a case study design is that it allows for the research to "retain the holistic and meaningful characteristics of real-life events" (Yin, 2014, p. 2). This is accomplished by examining current meanings and interpretations rather than merely describing objective facts (Eauston, 2010; Stake, 1995). This is important because I am interested in examining the various existent ways of understanding the identified key terms as well as shedding light on actual EE practices.

4.5. Selecting the Cases

I chose to incorporate two case studies in order to be able to examine how different pedagogical models and images of childhood affect the ways in which EE is understood and practised in the same national context (Mexico) yet in two different concrete settings. The inclusion of two case studies is important to increase the possibility of identifying a broader range of discourses and ways of understanding EE in addition to how these link to distinct pedagogical models and images of childhood.

Knowing that EE is a rather new arena, I used purposive sampling to select the specific context of each case study. The sample did not aim to be representative of all Mexican preschools; instead, it aimed to reflect the attitudes and practices of preschools in Playa del Carmen, Mexico, with an active interest in EE. The purpose of having two different preschools was not to compare them but rather to increase the possibilities of finding contrasting EE approaches that allowed for the exploration of how images of childhood and pedagogical models impact the way EE is understood and practised. The conditions used for selecting the cases were as follows:

a) The preschool must show an interest in EE topics and be involved in activities related to EE, whether through projects, campaigns, ethos or activities.

b) Each school must have contrasting characteristics in terms of pedagogical approach or curriculum and/or the type of service offered (public, private, etc.).

I employed this strategic selection of case study contexts, rather than opting for representative or random samples, as this is a way of gaining richer data that can help "clarify the deeper causes behind a given problem and its consequences", instead of merely "describ[ing] the symptoms of the problem and how frequently they occur" (Flyvbjerg, 2006, p. 229).

Initially, my idea was to include one public and one private preschool in the study; however, this was not possible due to the bureaucratic processes involved in gaining permission to conduct research in public preschools funded by the federal government as well as the reduced number of public preschools that met the criteria. I therefore extended my search to include any type of preschool—whether public, private or independent—currently involved or interested in EE. I started my search by attending events and visiting places that were related to the promotion of EE in Playa del Carmen and approached the organiser to tell them about my research. I then started a chain-referral strategy. Eventually, this led to my contact with the headteacher at each of the preschools where I conducted my study, namely the Waldorf Preschool and the City Preschool[14]. The Waldorf preschool was recommended by several people working in the NGO sector, as well as by other members of the community for being an 'eco-school' with a nature-based approach and outdoor education in the jungle. Differently, the City Preschool was referred by a local (government) authority for their upcycling practices and environmental projects.

After conducting initial meetings with the headteachers of each preschool, I considered these options as suitable cases for my research because they met the two selection criteria previously established. In terms of interest and involvement with EE, the Waldorf preschool had recently built a new campus based on the idea of eco-design. Likewise, activities such as outdoor play in nature and composting were in place at the time of my initial visits, and the headteacher described the preschool as an ecological school. In contrast, the City Preschool was in the process of starting a botany club for young children with the aim of promoting the idea of taking care of

---

[14] The names of the preschools have been changed to maintain confidentiality.

the environment; other relevant practices, such as recycling and upcycling projects, were also in place at the school.

Regarding the differences between the two cases, the Waldorf Preschool is a small independent school founded upon the principles of Waldorf pedagogy (also known as Steiner education). It is privately funded and managed in strict accordance with the principles of Steinerian anthroposophy. Meanwhile, the City Preschool is a large semi-private DIF preschool (funded and administered by the state government) guided by the Mexican national curriculum and inspired by the Reggio Emilia approach. Although these are both considered progressive and alternative pedagogies, their pedagogical principles differ from one another (see section 2.7). Each chosen school also differs fundamentally in terms of size of both the physical space and the number of students, organisation and overall structure.

4.5.1. Case 1: The Waldorf Preschool

The Waldorf preschool is located on the outskirts of Playa del Carmen, on a two-hectare plot of land almost in the middle of the jungle. It is a private independent preschool founded in 2006 with the idea of being a true Waldorf school as well as an eco-school. The preschool used to be registered with SEP, but a few years ago the headteacher and manager decided to separate from the system, which means that the preschool is entirely privately owned and managed. As they are no longer part of the official education system, they follow their own curriculum. The Waldorf Preschool is certified by the Association of Waldorf Schools of North America (AWSNA), and as such they follow Waldorf's pedagogical principles and curriculum. The pedagogical model and ethos are based on anthroposophy, a theory developed by Rudolf Steiner (see section 2.7.1 for a more detailed explanation).

Tuition fees are high, and families must pay for other expenses, such as enrolment fees and teaching materials. Different from most preschools, there are only two groups, one for babies and another for children ages four to seven. Compared to the City Preschool, the Waldorf is a relatively small institution. For instance, in the Waldorf's preschool group there are around 17 children in total, the youngest being about four years old and the oldest seven.

The staff at the Waldorf preschool includes the founder and owner, who is also the teacher of the babies group; two other preschool teachers are in charge of the toddlers group. All the teachers are trained in Waldorf education, but they do not have any other formal teacher training. In addition to the academic staff, there is a gardener and a housekeeper, who assists with general tasks around the preschool—mainly with cleaning, cooking and sometimes helping the teachers with the children.

Regarding the physical space, there are only two buildings, each with a round shape, and in one of them there is a kitchen, a dining table with small chairs and a playroom. There are toilets that are shared by adults and children, and there is water and electricity in the school. The rooms have big windows and fans on the ceiling to help keep the rooms cool. There are no staff rooms or administrative offices. There is also a big outdoor play area surrounded by trees; the playground includes a slide, a structure where children can climb and hang from a rope and jump and two small ponds (see Figure 5). Another relevant feature is that close to the preschool there is a small farm owned by a local family.

Figure 5. Playground at the Waldorf Preschool

4.5.2. Case 2: The City Preschool

The City Preschool is in a middle-class neighbourhood within Playa del Carmen, away from the main touristic zone but with easy access via public transport. It opened in 2015 as part of a project launched by the state-level government through DIF of the State of Quintana Roo. Therefore, it is funded by the state government rather than by the federal government, as other public preschools. Although it is funded by the government, parents pay a small tuition fee every month, and as such it is considered a semi-private institution. It is worth noting, however, that compared to other private ECEC settings in the area the tuition fees are still low at the City Preschool.

The City Preschool is incorporated to the SEP, and by law they must comply with official regulations and follow the national curriculum guidelines. In addition, this preschool was informed by the Reggio Emilia pedagogical approach. It was, nonetheless, noted by the headteacher and the principal at the time this study was conducted that teachers and staff were still at the initial stages of becoming familiarised with Reggio Emilia pedagogy, and not all the teachers had received formal training.

The City Preschool has a multidisciplinary team that includes the principal, a pedagogue (headteacher), a resident artist, teachers and assistant teachers, a social worker, a psychologist, a nutritionist, and nurses—plus administrative staff, cleaning staff and cooks. Preschool groups are organised according to age into: Investigators (ages 3-4), Discoverers (ages 4-5) and Sailors (ages 5-6). Each group is subdivided into small classes, and there is one teacher and from one to two assistant teachers per class. Each class has around 20 to 25 children.

In terms of the physical space, the City Preschool is a big building. At the entrance, there is a spacious lobby often used to display art installations and to receive parents and guests. There are around 10 classrooms, plus an arts classroom, a big canteen that provides breakfast and lunch for children, a small nursery room, a common meeting room, a teachers' room and cubicles for some of the staff. There is a playground at the front and another one at the back surrounded by bushes and trees (see Figure 6). There is water and electricity all over the school, and classrooms and offices have air conditioning.

Figure 6. A view of the front area of the City Preschool.

Table 6 below summarises the main characteristics of each preschool, after which I explain aspects related to the sub-sample and the participants.

Characteristics of each preschool		
	Case 1: Waldorf Preschool	**Case 2: City Preschool**
Interest and involvement in EE	Outdoor education; nature-based approach; eco-design (actual facilities)	A botany club aimed at taking care of the environment; recycling and upcycling practices
Type	Independent; 100% private; charges high fees	Semi-private; funded by the state government (through DIF); charges a small fee
Incorporated to SEP	No	Yes
Pedagogical model	Waldorf (Steiner education)	National curriculum, informed by Reggio Emilia
Location	On the outskirts of the city; not accessible by public transport	Within the city; accessible by public transport
Opened in	2006	2015
Staff	Headteacher; teachers; volunteer; gardener; housekeeper	Principal; head teacher(pedagogue); teachers; assistant teachers; resident artist; social worker; psychologist; nutritionist, nurses; administrative staff, cleaning staff and cooks

Number of children enrolled in the preschool	17 (approx.)	150 (approx.)
Overall organisation of the preschool	A single group of toddlers: ages 4-7	Children organised into three grades according to age: 1st Discoverers: ages 3-4 2nd Explorers: ages 4-5 3rd Sailors: ages 5-6 (Each of these groups is divided into three subgroups: A, B, C.)
Teacher–student ratio	Two teachers per 14-17 children	One teacher and one assistant teacher per 20-25 children

Table 6. Characteristics of the two preschools

4.6. Sub-sample and Participants

Within each of the preschools I chose a sub-sample of participants aiming to gather "informants who have the best knowledge concerning the research topic" (Elo et al., 2014, p. 4). My criteria for selection were:

- the headteachers and/or deputy assistant or assistant heads of each of the preschools;
- children ages 4-6 enrolled in the preschool who were currently involved in EE-related activities;
- teachers working directly with the children invited to participate;
- parents of the children who were invited to participate.

In total, the sub-sample consisted of 55 participants, 48 from the City Preschool and seven from the Waldorf Preschool. The difference in the number of participants, the roles and the characteristics of the sub-sample has to do with the contrasting size, structure and organisation of each of the preschools. For instance, at the City Preschool, only the children and the teachers from 2nd and 3rd grade who at the time were part of the botany club held at the preschool were invited to participate. This is because said club was the main EE project in which children were directly and actively involved. By contrast, at the Waldorf Preschool, all the teachers and their students were invited to participate, as there was only one toddler group and there were no specific or separate EE projects. The actual number of participants was further reduced, as only those who gave their consent and agreed to participate in the research on a voluntary basis were included. Table 7 below shows the number of

participants per case, while Table 8 and Table 9 provide more details about the participants from each preschool. The names of the preschools and participants have been changed for confidentiality purposes.

	Sub-sample	
	Case 1 Waldorf Preschool	Case 2 City Preschool
Head teacher/Principal	1	1
Deputy heads	N/A	1 pedagogue 1 resident artist
Teachers	2	2
Children	0	25
Parents	4	18
Total number of participants per case	**7**	**48**

Table 7. Sub-sample of participants per preschool

Waldorf preschool list of participants	
Academic staff (3): Gardenia, headteacher Eugenia and Dalia, teachers	
1 preschool group	
0 children	**4 parents**
• N/A	• Mario and Marta • Sol • Laura

Table 8. Waldorf Preschool participants (pseudonyms).

City Preschool list of participants			
Academic staff (5): Lily (Principal), Azalea (Pedagogue), Felicia (Resident Artist) Teacher Jasmin (leader of the Discoverers botany club) Teacher Sabina (leader of the Sailors botany club)			
2 preschool groups			
Group 1 botany club, Discoverers group (led by teacher Jasmin)		**Group 2** botany club, Sailors group (led by teacher Sabina)	
Children (ages 4-5)	**Parents**	**Children (ages 5-6)**	**Parents**
Paco	-	Ana	-
Dario	Diana	Claudia	Carmen
Isac		David	Daniela
Mónica	Maria	Enrique	Emilio
Memo	-	Faby	-
Mauro	Mia and Luis	Fernando	Claudio
Nora	Nadia	Gerardo	-
Paula	Pedro	Javier	Julieta
Vivian	-	Juan	-
Jesús	Isabel	Lalo	-
Caro	Carlos and Carla	Rita	Ricardo and Romina
Total: 11	**Total:9**	Sara	-
		Susana	Silvia
		Valentina	Vicente
		Total: 14	**Total: 9**

Table 9. City Preschool participants (pseudonyms).

4.7. Data collection methods

The main data collection methods I used in this research were observations and semi-structured interviews with preschool staff and with parents and semi-structured interviews with children using a photo elicitation strategy. I also included other naturally occurring data, such as informal conversations among children and their peers, with the teachers or with me. Moreover, at the City Preschool I incorporated some of the children's creations, like models and drawings.

The methods used to collect data in each preschool varied, as these had to be negotiated with the headteacher, the teachers and the children—and then further adapted to the particularities of each preschool. For instance, at the Waldorf

Preschool, I was not granted permission to conduct interviews with the children, rather just to observe, listen and interact with them in non-formal situations, therefore, no children were formally interviewed, instead impressions were gained through inevitable chance discussions held with the children over the course of their activities. Another difference is that at the City Preschool the data collection methods included drawings and models produced by children, as these were part of the activities designed by the teacher and were considered relevant for the aims of my study. On the other hand, at the Waldorf Preschool, drawings are not a common practice, and as a result this type of data was not gathered there.

4.7.1. The Mosaic Approach

In the selection of the data collection methods for this research, I chose to follow the principles of the mosaic approach because including children in research requires a framework that is flexible and adaptable to facilitate the communication and participation between the researcher and the children as well as between children and their pairs. This way of doing research aligns with my perspective of doing research *with* children rather than *on* them. Similarly, it holds a particular view of childhood that is akin to the principles that have guided my research, as it recognises children as social agents who are experts of their everyday lives, and it views them as skilful communicators, right holders and meaning makers (Clark & Moss, 2005). Moreover, it perceives "children and adults as co-constructors of meaning", inviting both to create personal and collective accounts that will result in a variety of perspectives and interpretations (Clark & Moss, 2005, p.1).

Informed by the principles of the mosaic approach, I used a variety of methods in a thoughtful way rather than merely systematically. Therefore, instead of looking for triangulation to corroborate results, the use of different methods serves here to "reveal the complexities of lived experiences" (Clark & Moss, 2005. p. 6). This means that I have tailored the methods according to the diverse cultural context, skills or preferences of the children and the naturally occurring circumstances at the preschools (the activities that took place on a regular basis at the preschool). It is important to clarify this point: The purpose of using visual as well as verbal and written tools in this research was not to test or corroborate the objectivity of the findings, or to decipher hidden meanings, but rather to facilitate communication

between the child participants and the researcher. The underlying premise behind this practice is that we all have different ways of expressing what we know, feel or experience.

Table 10 summarises the data collection methods used at each preschool, including the focus, situation or number participants per task when applicable. In the following section, I elaborate on each of the data collection methods used in this research by describing the strategy, the purpose and procedures. I start with observations, continue with children's drawings and models, then address all aspects related to the semi-structured interviews with staff and parents and, ultimately, conclude by explaining the semi-structured interviews conducted with children using a photo elicitation strategy.

		Data collection methods	Waldorf Preschool	City Preschool
Naturally occurring data	👁	Observations *Documented with written field notes	Focus: teachers and children from one group	Focus: teachers and children from two groups (Discoverers and Sailors)
		Informal conversation of/with children and teachers[15] *Documented with written field notes	Situation: children and teachers during free play time and walks to a farm	Situation: children and teachers during recess and the botany club
		Children's drawings and models *Documented with pictures and written field notes	N/A	Situation: children's productions during the botany club
		Semi-structured interviews with academic staff *60-to-90 minutes long; all content was audio recorded and transcribed.	Participants: 3 (headteacher and two teachers)	Participants: 5 (principal, pedagogue, resident artist and two teachers)
		Semi-structured interviews with parents *30-to-90 minutes long; all content was audio recorded and transcribed.	4	18
		Semi-structured interviews with children using photo elicitation. *15-to-20 minutes long; all content audio recorded and transcribed.	0	25

Table 10. Data collection methods.

---

[15] Impressions gained through inevitable chance discussions held with the children over the course of their activities.

4.7.2. Observations

Observations were the first data collection method I used in both preschools, and these continued until I finished my fieldwork. I chose to conduct observations because this method offers the researcher the opportunity to "gather live data from naturally occurring situations" and gain a novel perspective on common behaviours which otherwise might be ignored or taken for granted (Cohen, Manion & Morrison, 2011, p. 456).

My observations were informed by ethnographic research and, in that sense, they served a dual purpose. Firstly, they were designed to get familiar with the field, (Hammersley and Atkinson, 2007). This aspect is essential in any qualitative research that involves human participants, as it recognises the relational aspect of research. Building a sense of familiarity is important to get used to each other's presence and to facilitate a more open communication between the participants and the researcher (Barley, 2011). Secondly, observations were key to answering the second sub-question of my research, which centres on gathering information about what EE looks like in practice in each preschool. Seeing the participants in their own daily environment allows one to gain a better understanding of their everyday practices and experiences (Scott, 2009).

My observations had two focal points. The primary focus was on the unique characteristics of each preschool and how EE is addressed or tackled on a daily basis. This was accomplished by looking at the type of EE activities that were in place and how teachers and children engaged in these—as well as how they interacted with each other. The second focus was the placement, architecture and layout of the buildings, including classroom, which I documented with pictures.

My level of participation increased with time. At the beginning, in order not to be intrusive or disruptive of group dynamics, I aimed to have little interaction with the children and teachers. I was aware that having another adult in the setting could make both the children and the teachers feel uncomfortable, even when we had previously agreed to my visits. Therefore, the first 2-3 sessions were mainly to generate rapport and learn more about the general functioning of the preschool and the group dynamics without much intervention. Subsequently, I adopted a more hands on approach and tried to participate more in the group dynamic, which was a

good way to help children and teachers feel more acquainted with my presence and not see me as an outsider anymore.

As part of the observations, I also documented informal conversations that took place during my visits to the preschools. These included some dialogues of children with their peers, teachers with children or teachers with other teachers or with me. It is important to note that the way observations occurred in each of the preschools varied. This requires a brief explanation, which I provide below.

Observations at the Waldorf preschool

I conducted observations on different days during October and November of 2018, once or twice a week, depending on the availability and arrangements made with the headteacher (see Annex VII). During my first observations, the teachers instructed me not to interrupt or interact directly with the children.

On my first day at the preschool, the teachers asked me to sit in the corner of the room, handed me a piece of yarn and asked me to knit and quietly observe the group. I was reminded not to talk to the children or interact with the teachers during the class to avoid interruption. A few sessions later, the staff started to include me more in the activities. For instance, they invited me to their staff gatherings in the mornings, and I began to help them with the washing up or other tasks they needed. Later, I was invited to join in other activities with the children and to sit down or walk next to them. This allowed me to get closer to the children, listen to some of their conversations and interact verbally with them in a few occasions. I wrote my field notes afterwards, once I had the left the setting.

Observations at the City Preschool

Here, I conducted observations of two preschool groups from November 2018 to February 2019 during a botany club that had been recently launched. The club took place twice a week and sessions lasted approximately one hour. I also conducted observations during recess time and spent one full day with one of the groups before the botany club started.

On the first day of observations, the teachers introduced me to the group and gave the children a short explanation of what I would be doing. From this first visit, I sat on the floor next to the children during group time or moved around the classroom.

Most of the sessions, I tried to stay closer to the children and listen informally to their conversations, ask them questions or help them with some tasks if they asked me to. Sometimes, I would also help the teachers with distributing materials for the children and tidying up. By the last months of my fieldwork, I also went a few times to the teachers' room to have lunch with the teachers.

I decided to take handwritten field notes while I was doing the observations for two reasons: first, to capture key messages in real time and, secondly, so that children would be aware that I was conducting research. For this purpose, I carried a little pocket notebook with me to write short notes during the sessions. Occasionally, children would ask me what I was writing. I took these opportunities to remind them about my research and to read them something that they had said that I had written down (if anything). They would often reply excitedly, "Yes! I said that!" This was a way of reminding them that I was there in the botany club because I was conducting research. My notes were complemented afterwards with further elaborated typed notes in order to capture additional information that I was not able to record while in the class.

4.7.3. Drawings and Modelling

At the City Preschool, drawings and models produced by children were also included as naturally occurring data, meaning that these activities were not elicited directly by me as a researcher (Golato, 2017). The opportunities for children to draw or create models using different materials were part of the activities that the teachers had organised for the children while I was conducting the observations. Therefore, I documented these by taking pictures with my mobile phone and writing short memos in my fieldwork notebook.

The rationale for including this data is that these are examples of what happens in real life conditions which help to explain the dynamic and approach at the preschool. Likewise, drawings and models are alternative ways in which children communicate their ideas. In sum, these were unique opportunities which helped me to gather as much information as possible about the topic under investigation.

4.7.4. Semi-structured Interviews with Academic Staff and Parents

At both preschools, I conducted semi-structured interviews with the academic staff (i.e., headteachers, deputy heads and teachers) and parents. At the City Preschool, I conducted 5 interviews with staff and 13 with parents, while at the Waldorf preschool I interviewed 3 members of the staff and 4 parents.

Interviews with the staff and the parents aimed, firstly, to collect data about their understanding of key terms (environment, EE and sustainability) and, secondly, to identify teachers and parents' images of childhood by exploring assumptions and discursive truths about young children, including how the participants believe children should learn. This included their views on EE at the preschool level as well as aspects related to addressing environmental problems with young children at the preschool level. Additionally, the interviews with teachers served to explore and further comprehend what happens in practice by clarifying some aspects observed during my initial visits to the preschools.

I chose semi-structured interviews because they allow one to explore a topic and access the participants' situated knowledge in an informal style that resembles a conversation rather than an examination or an oral questionnaire (Mason, 2002). Employing a less formal style was important to lessen tensions that could arise between the researcher and the participants and in that way create a space that allowed for rich conversation and exploration.

Before conducting the interviews, I designed a set of guiding questions (Annex III and IV). Yet, these questions were not always deployed in the same order. Instead, I tailored each interview guide according to the conversation being held. This meant that I asked further questions to some people but not to others. Likewise, when people seemed to feel uncomfortable or had limited time, I decided to skip certain questions. This happened particularly when talking about topics such as sustainability with the staff at City Preschool, as I noticed some teachers were not familiar with the term.

At both preschools, all the participants were given the opportunity to choose where and when they wanted to be interviewed. To generate rapport and gain a better understanding of the context, I decided to conduct the interviews after having spent some time at the setting rather than at the beginning. I started all the interviews

reminding the participants that their involvement in the research was voluntary and that they did not have to answer all my questions if they did not want to. I also told them in a very friendly and respectful way that there were no right or wrong answers.

The interviews with teachers lasted around one hour. The length of interviews with parents varied, however: Some were only 30 minutes long whereas others lasted nearly an hour and a half. All the audio was recorded and then transcribed.

At the City Preschool, all the interviews with teachers took place within the setting during regular working hours when the staff were not too busy. Interviews with parents were conducted at the preschool, as well, except for one that took place at a café. Interviewing parents proved to be more difficult than expected, as they seemed to have very limited time, hence the notable variation in interview lengths within this sub-sample.

At the Waldorf Preschool, the interviews were conducted in different locations. I interviewed the headteacher in an empty room within the school, whereas interviews with the teachers took place at their homes. As far as the parents, Marta and Marcos were interviewed at a café while Sol and Laura were at their homes. All the content of the interviews was audio recorded using a mobile phone and subsequently transcribed for analysis.

4.7.5. Semi-structured Interviews with Children Using a Photo Elicitation Strategy

At the City Preschool, I conducted interviews with children using a photo elicitation technique. Photo elicitation is a qualitative method that consists of using photographs or pictures during an interview to prompt responses from participants (Harper, 2002). Studies from different disciplines have used photo elicitation as an effective tool to trigger a rich conversation around complex topics (Carlsson, 2001; Harper, 2010; Pyle, 2013; Spiteri, 2015; Walker, 2014). Moreover, photo elicitation has the advantage of evoking a wider and deeper variety of insights than text or words would do on their own (Harper, 2002). Likewise, explaining pictures can encourage the participants to "speak in their own voice" (Carlsson, 2001, p. 126). Furthermore, it contributes to balance the power differences between the researcher and the participants, as it attracts the interviewees' attention to the discussion of

"something concrete and visible" rather than abstract and unfamiliar (Carlsson, 2001, 126).

Research that has used a similar strategy suggests that an effective way of keeping children engaged in the research is including pictures of themselves or of places and people that are closer or more familiar to them in their daily lives (Smith et al., 2005). Considering this, I created a set of 10 photographs in which I incorporated pictures of the children themselves and the preschool. The rest of the pictures in the set were mainly about some of the environmental problems or topics the parents and teachers had mentioned during the interview. My intention when selecting these pictures was to have common topics of discussion between the adults and the children while at the same time capturing children's own ideas and perceptions.

Likewise, to make the activity more appealing and interactive, as well as to give more control to children over the research task, I decided to let the children choose the pictures they wanted to talk about, instead of ostensibly directing the entire interview myself. Giving the children the opportunity to do so aided in making the task less adult-directed and more dialogical. Likewise, it allowed me to take on the role of listener while the children were interpreting the photographs (Loeffler, 2004, p. 553). In this sense, the pictures acted as a bridge or as another way of communicating with children. The pictures were particularly helpful to address complex questions without having to use long sentences or complex vocabulary. For instance, instead of asking questions such as, 'What do you think about the deforestation in your city?' The pictures allowed me to simply point at one picture and ask, 'What do you think about this?'

Another strategy I used to keep the balance between adults and children when conducting interviews and to make children feel more comfortable and enhance the richness of the data was to conduct the interviews in pairs or small groups (as suggested by Mayall, 2001). However, this was not always possible given external factors out of my control. For instance, I interviewed three children individually because they were absent on the day that the group interviews were planned. Nevertheless, when the children returned, they were still willing to participate in the activity, and so I adapted the research schedule to interview them individually. Before doing so I made sure they knew that the interview would be one-on-one with me, as the other children had already completed the task in groups.

To plan and carry out the interviews, I worked in collaboration with the teachers who helped me choose those whom they thought will be a good match for the interviews. They considered aspects such as whether they were friends or belonged to the same group. The teachers also helped me to find a place and time for the interviews and to explain the research task to the children. Teachers' involvement in this process varied from one group to another. In the Sailors group, for instance, the teacher showed more involvement, and she even prepared a short speech for children to explain in simple terms the purpose of the interviews and how these would take place. Differently, in the Discoverers group, the teachers only told the children I had planned an activity for them and let me explain it to the children myself. Overall, children seemed to be very enthusiastic about helping me with my study.

Before starting the interview, I used some pictures (see Annex VI) to remind the children very briefly what the task was about, why I wanted to do this and, finally, to ask them again if they were still willing to take part and have their voices recorded. Only one boy said he did not want to have his voice recorded, but he was still willing to be part of the activity. In order to accommodate his preferences, the recorder was turned off when he was talking.

I started the task by showing the children a set of pictures (see Annex VI), each of which was marked with a number to identify it. I then invited the children to take turns choosing a picture and then tell me what they saw. I continued by asking follow-up questions, such as, 'What do you think about that? Why do you think so? Or have you seen something like that? How does that make you feel?' I also encouraged other children to participate in the conversation in an effort for all the children in the group to say something about the picture. However, I also respected when children preferred to remain in silence. Some children also deliberately replied by stating, 'We don't know about that'.

The interviews took place in either one of the halls, a classroom or one of the playgrounds. The interview location depended very much on the availability of the spaces, and finding a quiet space was often challenging, as in general the setting was quite busy and thus noisy. The interviews conducted on the playground helped children to point at things or to use elements they found nearby to explain an idea. The interviews that took place inside the classroom facilitated the dialogue, as it

was easier to hear what children were saying, which I believe also helped children to elaborate their ideas more readily. However, regardless of the measures taken to avoid interruptions, in two occasions I had to suspend the interviews given external factors. This means that not all groups managed to discuss all the pictures in the set.

On average, the interviews lasted around 15 to 25 minutes, and all the content was recorded and then transcribed. I interviewed 24 children in total, and all the interviews were audio recorded using a mobile phone and a watch.

4.8. Data Analysis

I chose to use discourse analysis techniques (Alldred & Burman, 2005; Parker, 1992, 1994) combined with thematic approach (Braun & Clarke, 2006) to analyse my data because these two complement each other and are essential to perform a critical analysis of EE. On the one hand, thematic analysis allows one to look for patterns and themes to distinguish the different ways of understanding and practicing EE. On the other hand, discourse analysis is essential to analysing discursive practices. I used the discourse-analysis approach in this study to examine how participants discursively construct their understanding(s) of EE and childhood as well as to analyse the "contextual configurations of meanings" that inform their ways of making sense and *doing* EE (Holstein & Gubrium, 2013, p. 255). Moreover, since discourse analysis allows for the examination of sets of discourses that circulate and how people make use of them in a particular context, I used it to identify and analyse critically images of childhood among teachers and parents and shed light onto how these operate (Sapsford, 2006).

Discourse analysis pays attention to the use of language and the power dynamics that take place in a particular context (Punch, 2009). In this case, it serves as a critical lens to analyse how the understandings and practices of EE in ECEC in Mexico are shaped by looking at, for example, how participants refer to other participants, how they position themselves and others and, finally, how they validate their own discourses or beliefs.

In tune with the poststructuralist framework of this thesis, an important aspect of discursive analysis is that it highlights the role of the researcher, subjectivity and

interpretations from the beginning, including the production of the text to be analysed. In that sense, the analysis is seen as a process in which data is interpreted and meanings are constructed rather than assuming that "themes or discourses 'emerge' from the text in any immediate or disembodied way" (Alldred & Burman, 2005, p. 189). Parting from this vantage point, my analysis of the data consisted of five steps:

1) Getting familiar with the data and producing the text. This is the initial stage of the analysis in which the data collected is transcribed to a written digital format in order to produce a readable document. I did this using simple headphones and a text processor on my laptop. Once all the interviews were transcribed, I read each transcript again and added headings and subheadings to the document in order to organise the content. The documents were saved and organised into different folders.

2) Making connections and generating initial codes. Once all interviews had been transcribed and organised, the second stage consisted of reading the transcripts and highlighting relevant quotes. I then copy-and-pasted the quotes to an excel table, read each quote again and wrote key words next to them in order to start generating initial codes.

All the process of data analysis was done using the transcript in Spanish (original language). Later, I highlighted and selected parts of the text (quotes), which I then translated to English myself. While translating, I took special care to find the most accurate way of transmitting the original message, which also helped me to reflect again on the meanings and my process of interpretation. At this stage, I also started looking for general meanings and checking for possible connotations.

All data was coded manually using a simple spreadsheet which included participants names, quotes, key words and codes. I analysed the data from the different groups separately, i.e. children in one tab, teachers in the second and parents in a third. I decided not to use any specialised software to process the information in order to remain closer to the data and keep additional information and other bits of data always at hand.

3) Identifying objects and subjects within the text. This was a long process that required me to reorganise the quotes and go back to the original transcript. There, I

looked for the subjects and objects in the text, that is, who the message was directed toward, how different elements of the discourse influenced others as well as similarities, contradictions, absences and differences. Initially the data was organised in function to the research questions and later different categories were grouped, and initial themes and sub-themes were proposed. The quotes and transcripts were then treated as belonging to a theme. At this stage, I used diagrams with different colours, labels and connectors to represent findings in a visual form.

4) identifying right and roles. A further analysis was carried out to identify the images of childhood. I did so by looking again at all the data from parents, teachers and children—but this time paying attention to two specific aspects. First, I extracted both explicit and implicit definitions from children and explanations of what children should or can do, as well as how the teachers and parents think they learn. Secondly, once dominant images were identified, I conducted another literature review in order to identify any other possible images.

5) Institutional links. In this final stage, I focused on examining how the different subjects and key components of the research relate to each other and, in function of the cultural sets of claims around them (i.e., how discourses of childhood influence or inform understanding and approaches of EE), how they relate to the pedagogical models and what discourse they reproduce or contest. I brought together the findings from the different data sets and searched for institutional links to map broader discourses. At this stage, I revisited the literature again and started to construct a map to link images of childhood with EE approaches. To construct the map, I extracted key words, created labels and wrote simple, short sentences that were used to generate a visual representation of the finding in one diagram, using colours to mark how the different aspects link to each other.

4.9. Ethical Considerations

The ethical procedures that guided my research encompassed procedural ethics, which include formal processes and clearance, relational ethics that refer to "an ethical self-consciousness in which researchers are mindful of their character, actions, and consequences on others" as well as situational and cultural ethics,

which seek to adapt to the social and cultural characteristics of the place where the study is conducted (Tracy, 2010, p. 847).

In terms of procedural ethics, throughout the whole research process—from the design to the data collection and writing up stages—I followed the ethics guidelines of the British Educational Research Association (BERA, 2014). Moreover, I obtained ethical approval for conducting research with people from the Institute of Education prior to starting my field work in Mexico. This included gaining a Disclosure and Barring Service (DBS) check and a careful consideration of potential harms and benefits.

Regarding relational ethics, I gave special consideration to making all the participants, especially children, feel comfortable and safe. Hence, I was particularly careful with several aspects, including using language that was appropriate, clear and not patronizing. I presented myself as someone who was there to learn rather than as an expert who knows all the answers. I constantly reassured the participants that I was genuinely interested in knowing and learning from them and tried to be as clear as possible about the goals and limits of the research.

Mutual respect, dignity and connectedness were essential components in my research (Ellis, 2007). Privacy and confidentiality were ensured, and I was very thoughtful to any signs that could indicate distress. Whenever I noticed any sign of such, I made sure participants were aware they did not have to continue in the research and that it was acceptable to say no or skip questions. To protect the identity of the participants as well as the names of the preschools, I used pseudonyms throughout this thesis. The data collected was stored on my computer, which is encrypted and protect with a secured password. All this information will be deleted in due course after the completion of my thesis.

It is relevant to note that there are no official ethical guidelines for conducting research with children in Mexico. However, following BERA's guidelines and the notion of doing research with children, I informed and obtained permission from the local authorities before starting the data collection. Likewise, I gained informed consent from both children and adults, which I explain in more detail below.

4.9.1. Gaining Access and Obtaining Informed Consent

Before starting my research in Mexico, I made an appointment with one of the local authorities to introduce myself personally and explain my research. Next, I began contacting the preschools. Firstly, I arranged an appointment with the headteachers of both preschools to formally introduce myself and my research. Secondly, we agreed on the days and frequency of my visits and the type of data collection methods that I would be able to employ at each preschool. At the City Preschool, an additional general meeting with all the preschool teachers was organised, and I was introduced to them and some other members of the staff. At the Waldorf Preschool, there was no formal introduction. Instead, the headteacher had previously informed the teachers and parents that I will be conducting research, and I introduced myself personally on the first day at the preschool.

Informed consent from all the participants was obtained before conducting the research. Nevertheless, it is important to highlight that the process was not the same at the two preschools, and it varied as well among participants, which had implications regarding how data was collected. These aspects are relevant and pertinent in function of situational ethics, which alludes to "ethical practices that emerge from a reasoned consideration of a context's specific circumstances" (Tracy, 2010, p. 847).

In general, participants did not seem familiar with the idea of having to provide written consent. Based on my informal talks with teachers and parents, I noticed that some of them felt oral consent was more important, as it was based on trust and the idea of "giving your word", whereas written consent was seen as a mere administrative requirement. Below, I explain how consent was obtained from teachers, parents and children in each of the preschools. Assessing the situation and considering that ethical decision-making should take into account the particularities of distinct contexts, I decided to start my observations after obtaining oral consent only.

Consent from Teachers

In the case of the teachers from the City Preschool, I distributed information leaflets and consent forms during the meeting I was invited to (see Annex I and II). I had the chance to talk in front of all the teachers and explain in detail who I was and what I

would be doing. The teachers, likewise, had the opportunity to ask me questions and express any doubts or concerns. We agreed to start the observations, and the signed consent forms were collected the following days. Before conducting the interviews, I made sure the teachers were still willing to participate on a voluntary basis.

At the Waldorf Preschool, informed consent was first gained orally as a mutual agreement between the headteacher and myself, and later I obtained oral consent from each of the two teachers on the first day I went to the preschool. Later, but before conducting the interviews, I asked for their written consent.

Consent from Parents

To obtain consent from parents at the City Preschool, firstly, with the help of the teachers and the authorization of the principal, I distributed a text message among the group of parents explaining the aims of the research, its implications, data gathering techniques, timeframe and aspects related to confidentially. In collaboration with the teachers and the staff, we arranged to send printed copies of the information leaflets and consent forms and asked parents to return to their teachers. The teachers then handed in the signed forms to me (See Annex II).

At the Waldorf Preschool, the head teacher sent a text message to parents on my behalf. I then introduce myself to the parents, whom I met personally at the preschool during my visits and handed them my research leaflets. Additionally, before conducting the interviews, I explained the purpose of my research again and obtained written consent. All the participants were given the opportunity to ask questions before, during and after the interviews, and I stressed that their participation was voluntary and that they could withdraw from the research at any time.

Consent from Children

At the City Preschool, this was done with the help of the teachers who told the children I was going to be observing the botany club. Both teachers then gave me the opportunity to introduce myself and tell the children more about my research. I did so by explaining to them that I would be joining their botany club because I wanted to know what they would be doing and learning. I also told them that in order to remember all the things that happen I would be taking notes and pictures. I

informed them that if they did not like that, they could tell me, and I would put my notebook and/or camera away. I also stressed that they did not have to talk to me, be in the pictures or come closer if they did not want to. Further oral consent was obtained before conducting the interviews.

Informed consent and ensuring children were aware of my presence as a researcher was an ongoing process that required constant engagement and being attentive to their reactions and questions. For instance, sometimes children used to call me teacher; when this happened, I briefly reminded them the reason I was there and encouraged them to call me by my name rather than teacher.

Despite children being competent active agents, it is also clear that there is a power imbalance between adults and children. The hierarchical order deployed by generational aspects of adulthood/childhood often places children in a subordinated situation and the adults, including the researcher, in a privileged position commonly associated with authority (Alderson & Morrow, 2011; Mayall, 2008; Punch, 2002).

Although the generational differences between adults and children can be neither ignored nor obscured, they can be addressed in certain ways that might help to lessen this power imbalance and avoid being regarded as authority. As such, during my visits, I was particularly careful to make children feel comfortable and always respected. Creating rapport and a friendly and relaxed environment for the children was crucial. I did so by spending time with them, learning their names, sitting next to them, answering their queries, singing along or helping them when they asked—and it was appropriate to do so. Children soon learned my first name and used to give me a warm welcome every time I visited the class.

At the Waldorf Preschool, consent from children was obtained in a less formal way, mainly because the headteacher did not allow me to allocate the time to explain to the children who I was and what my research was about. She explained that a formal introduction and explanation would interrupt the activities of the centre, and she argued it might not be necessary, as children could tell by my lack of adherence to the school's dress code that I was not a teacher. She maintained that if children wanted to know more about me and my presence, they could approach me and ask.

Adherence to the moral and ethical principles that guided my study were of core importance, and I strived to constantly remind myself, and the participants, of two

basic premises: first, that I was there to learn from them and what they do and that their time and help was much needed and appreciated; and, second, that each person's time and decisions are valid and valuable, and therefore these should always be respected, even when these might affect the initial research design or academic goals of my study. This, however, had several implications and limitations in the way data from children was collected at the Waldorf Preschool, which I address next.

4.10. Limitations of the Study

A fundamental aspect to highlight regarding the limitations of this research is that, given the theoretical and philosophical underpinnings of this thesis and the qualitative approach chosen, my research does not adhere to principles such as standardisation, objectivity, generalisation or strict replicability. Instead, this study is concerned with the trustworthiness of the research design and the research process as a whole (Lincoln & Guba, 1985). In that sense, the relevance and soundness of the study is related to aspects such as rich data, accuracy, prolonged engagement, integrity and reflexivity—as well as ethical principles and contextuality (Gilgun, 2010; Lincoln & Guba, 1985; Maxwell, 2009; Tracy, 2010).

Rich data collection was accomplished by having different data sources, such as interviews with children, teachers and parents, observations and other naturally occurring data. To keep the content as accurate as possible, all interviews were audio recorded, and I then produced verbatim transcripts of all the interviews. My observations were turned into fieldnotes, and I was as descriptive and precise as possible in these. Additionally, I listened to the recordings and read my notes multiple times at various stages of the research, which allowed me to reconsider and revaluate how the findings were presented and interpreted.

Moreover, the vast amount of time I spent at each setting contributed to my gaining a clearer picture and better understanding of the actual day-to-day experiences of each preschool by familiarising myself with the participants and the characteristics of the place (see Annex VII). This was all key in order to avoid misleading associations and premature suppositions (Maxwell, 2009).

Another nodal aspect in my research journey that adds to the integrity of this study is reflexivity. Reflexivity enhances the integrity of the research by allowing researchers to embrace their subjectivity without letting that be an obstacle for conducting a sound piece of research (Gilgun, 2010). Reflexivity can be achieved by acknowledging the role of the researcher within the process that led to the interpretation of particular meanings (Alldred & Burman, 2005).

One of the strategies that I employed to reflect on my position as a researcher was keeping a research diary and taking time to identify and question my own initial thoughts and feelings. This process was relevant to identify when I needed to stand back from an idea or a situation and look at the bigger picture. Moreover, I was particularly aware that being a student pursuing a PhD in the UK, even when I was born and raised in Mexico, was a position of privilege that could cause me to appear as intimidating for some people who might view me as an expert outsider who was there to judge them or teach them something they do not know. I was aware that this dynamic could create resistance and distance between me and the participants or make them feel that they were being assessed and had to provide certain type of answers. To address this issue, I constantly reflected on my interactions with the participants to check and adapt both verbal and nonverbal communication, which led me to adopt a less formal communication style and be actively reflective regarding my role and positionality as researcher.

While my study was not comparative and the focus was not on generalisability or predictability of findings, I acknowledge that there are two major limitations related to the characteristics of the cases and the size of the sample. Firstly, the two cases chosen are not the most common type of preschools in Mexico. As a result, they only represent a rather small and privileged sector of the population. Despite not being representative, the uniqueness of the cases chosen does reflect the contrasting social and economic conditions that exist in the country, as well as the diversity of pedagogical approaches and ways of understanding EE. Furthermore, my research gains relevance as it allows for the critical analysis of discourses and, particularly, European pedagogical models that are internationally known in the field and which are often used as examples of good practice rather than critically analysed. In that sense, the exploratory and pioneering nature of this research highlights its original contribution to knowledge.

At this stage, it is also relevant to refer to my personal background and positionality. As a Mexican coming from a middle-class family, I studied mostly in private settings and later worked in the private sector and private schools. Therefore, I am familiar with the way such sector functions. Moreover, as a woman who has studied and lived abroad for several years, I am aware that I am in position of privilege and I am also highly influenced by European educational theories and approaches myself.

On the one hand, these are aspects that informed my decision to conduct research in these two preschools given that in the current era of neoliberalism and privatization, I consider it fundamental to critically interrogate the discourses, pedagogies and practices that circulate in these privileged educational settings to shed light on how these gain the status of alternative and are often regarded as more effective. On the other hand, however, considering that in general private and public education settings operate in different ways and follow different administrative protocols, my familiarity with the private sector as well as the time spent abroad studying could have been factors that distanced me from the public education sphere in Mexico and limited my chances of finding key people from either public or indigenous preschools that could have helped me gain access to preschools with different features.

A second main limitation related to the sample is the uneven number of participants from each preschool and, more importantly, not being allowed to conduct interviews with children at the Waldorf Preschool. While the difference in the number of participants was to some extent expected, as each preschool represented a unique case with very different characteristics and organisational structures, the absence of children as participants at the Waldorf Preschool represents a major limitation.

The lack of opportunities to interact directly with children and not being able to interview them prevented me from addressing and exploring more specific topics. More importantly, it reduced my chances of getting to know children's views from their own voice and limited the potential further exploration of children's perspectives and how these relate to those of their peers, their teachers and their parents. Besides, it also removed the possibility to analyse their answers in relation to the children from the City Preschool, which could have offered further insights about children's views of the environment, environmental problems and what they are

interested in—as well as how they navigate and make sense of notions such as living in harmony with the environment. Although I tried to compensate for this by spending more time at the Waldorf Preschool, the opportunities to interact and start conversations with children were scarce, and thus the possibility of doing research with children in this case was to a great extent constrained.

4.11.Chapter Summary

This chapter has explained the qualitative approach chosen for this study in relation to the aims and research questions. The case study design was illustrated, and the two cases were introduced, including a list of participants for each case and a description of each preschool. Data collection methods and procedures as well as the data analysis were explained in detail. Ethical aspects, including obtaining informed consent from participants, was clarified, and, lastly, limitations of the study were discussed. The four chapters that follow correspond to the findings of the research.

5. Two Ways of Doing EE in ECEC: A Lifestyle and a Club

This is the first of four findings' chapters. Here, I show how EE is understood and practised at the two preschools by looking at the different scenarios that teachers construct, negotiate, navigate or resist. Firstly, I analyse teachers' understandings of key terms such as EE, environment and sustainability, which serves to form a picture of how teachers interpret EE, what they think EE should be about, and how it relates to their notions of the environment. Secondly, I show the ways in which EE works in practice. This includes not only specific activities and content but also how spaces are arranged and used, as well as the types of events and projects around EE that take place in each preschool.

These two aspects are complementary and serve to form a better picture of how EE is tackled at both the discursive and the actual, or practical, levels. In this sense, teachers' interpretations of the terms contribute to gaining a better understanding of how the aspects that occur in practice link to teachers' ways of interpreting EE and examine how teachers justify their beliefs and actions. I present the results of each case separately. I start with Case 1: The Waldorf Preschool and later I introduce Case 2: The City Preschool. For each case, I begin with the results on how teachers and staff understand the terms environment, EE and sustainability and then I explore what EE looks like in practice.

To discern the spectrum of narrow to broad EE approaches, I refer to Lucas' (1972) categorisation of EE education as education about, in, and for the environment (see Section 2.1), as this helps to outline in a general sense the ways in which EE is enacted in each preschool.

5.1. Waldorf Preschool: EE as a Lifestyle

At the Waldorf Preschool, the way EE and key terms are understood as well as how they are practised can be encapsulated in the idea of EE as a lifestyle. The notion of a lifestyle was based on three core ideas, firstly, the understanding of the environment as a philosophical and spiritual place; secondly, the view of EE as living in harmony with the cosmos; and thirdly, the view of sustainability as a synonym for

EE. There was also a strong reluctance to trigger conversations or discussions about the environment or environmental problems with children as seemingly a rejection of actions oriented towards teaching about the environment at the preschool level. Because of the emphasis given to bonding with nature and the experiential and aesthetic focus of EE found at the Waldorf preschool, the notion of living in harmony with the environment is located within the spectrum of environmental education approaches. Figure 7 summarises the findings and I explain these in more detail in the following sections.
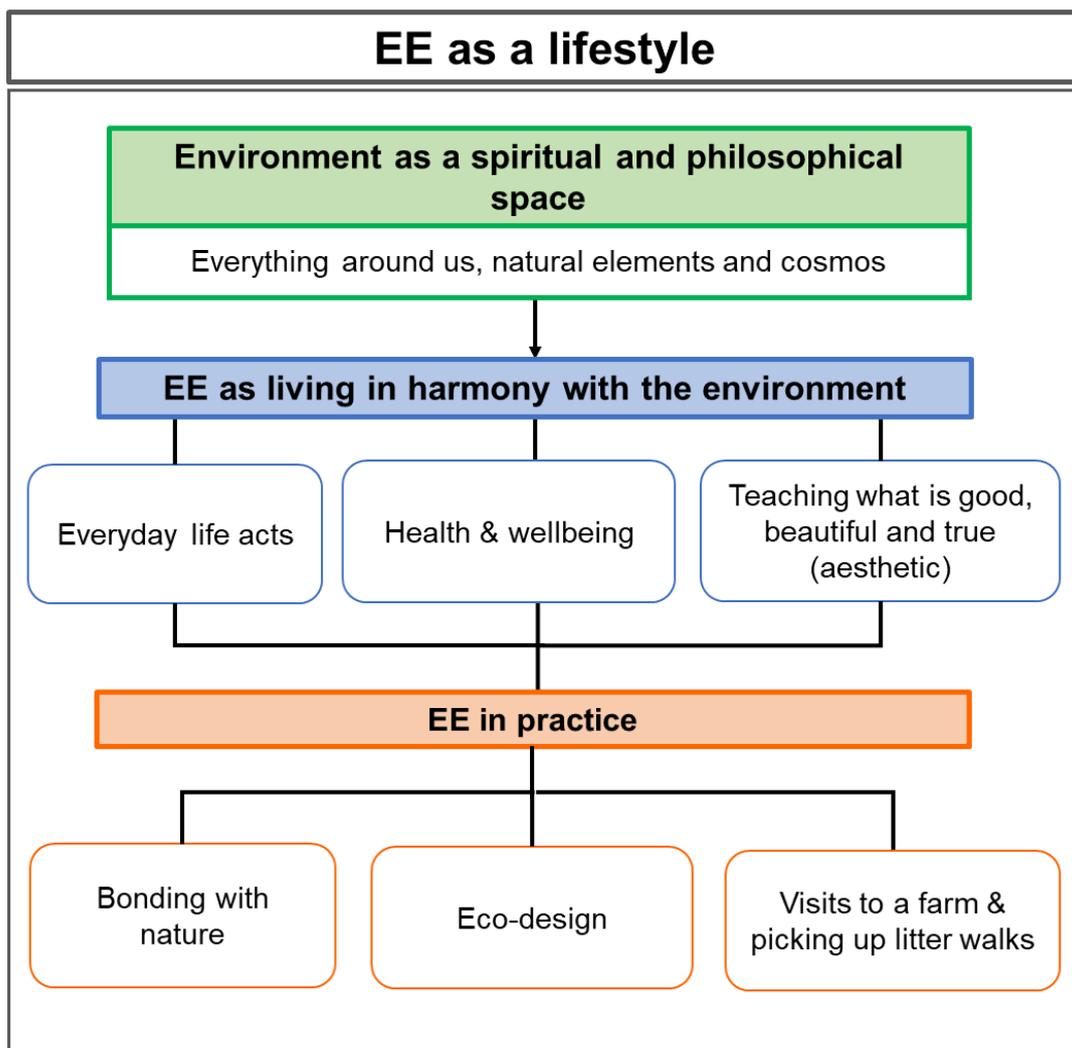
Figure 7. EE as a lifestyle at the Waldorf Preschool

5.1.1. Environment a Spiritual and Philosophical Space

Teachers at the Waldorf preschool defined the environment as everything around us, yet Gardenia, the head teacher, elaborated more about the idea of the environment as philosophical space, which reflects the overall ethos of the preschool:

> When someone talks about the environment I think of the space where we live. I don't see anything specific…The environment I see it more philosophical than scientific.

By stressing the philosophical aspect, Gardenia highlights the non-material and non-physical aspects of the environment. The comparison between the philosophical and scientific aspects of the environment is relevant as it reflects Gardenia's posture against scientific and academic conceptions of EE. A further elaboration on the term also reveals a conception of the environment as a cosmos that encompasses not only flora and fauna but also elements, objects, and people in the universe.

> All elements in nature have energy, then the Earth made a big effort to give us a tomato or a banana, therefore we thank Mother Earth, father sun and the elements that are the ones that provide this food so we can exist.

Such positioning appears to be influenced by anthroposophy, as she explained:

> Anthroposophy is the philosophy that forms the basis of the Waldorf pedagogy…what Stainer did was to study deeply all the disciplines with a spiritual impulse… really the pedagogy covers the spiritual environment, more in contact with the universal connection.

Spirituality is presented here as the dimension that connects the different elements of the environment. These examples show an understanding of the environment as a cosmos, which aligns with the notion of nature as a unified whole and the belief that everything is interconnected in an organic and balanced way, a narrative that is often associated with the connection to nature discourse (Duhn, Malone & Tesar 2017). Gardenia's accounts evidence the influence that the Waldorf pedagogy, particularly the emphasis on spiritual aspects, has on her conception of the environment. As I revisited in Chapter two, Steiner developed anthroposophy as an alternative philosophy of human beings based on what he named occult sciences and spiritual sciences, aiming to build a different type of education that could counteract the traditional dominant models of education based on instruction. In her position as

head teacher and founder of the Waldorf Preschool, it is interesting to note that the notions of environment and spirituality within Gardenia's discourse take a central place and expand to other aspects of the preschool ethos. Moreover, the spiritual dimension of the pedagogy also seems to influence her own personal values and subjectivity, as can be seen in the following extract from the interview:

> This pedagogy [Waldorf] sees us as spiritual beings doing earthly work on Earth, so when I learned this, I said, yes! This is what I've always wanted.

Through these examples it is possible to see how Waldorf pedagogy is used as a direct reference to construct a discourse around the conception of the environment as spiritual that departs from the merely rational and positivist discourses of science. This understanding of the environment is also a key component of the conception of EE which will be examined in the following section.

5.1.2. EE as Living in Harmony with the Environment

The notion of living in harmony with the environment was dominant at the Waldorf preschool, and once again, this idea emphasises spirituality and shows strong links to the pedagogical principles. Aspects such as coexistence and quotidian experiences with and in the environment are presented as aims of EE. In that sense, EE, rather than being framed as a specific topic or subject to be taught, is understood from a practical and experiential perspective, as explained here:

> Really, what the [Waldorf] pedagogy aims for is to live in harmony with the cosmos, with the human being, and with what is around us. What we do is respect others and live by respecting what is around us…Because the philosophy tells us that we must be in harmony with everything, and that's what we do. It's not like you teach the child, "Let's take care of the tree; now let's water it; now let's classify rubbish; and now we're not going to use plastic anymore." You don't tell children that kind of stuff, but as adults, we live it. We recycle, we try not to generate rubbish, we make compost, it's part of everyday life at the school, it's part of Steiner's philosophy and as such, it's part of the pedagogical work of the preschool.
>
> (Gardenia)

This view of EE places experience and learning by example over other EE approaches oriented towards learning about the environment. A similar plot, was

also evident within teacher Dalia's narrative who also stressed the idea of experiential learning over conceptual learning:

> I don't think it is necessary to tell children specifically, "Come sit down, I'm going to tell you more about the environment." But I do think that you can sincerely implement activities, you don't have to come with a double moral to explain pollution and do nothing about it. It would make more sense to do something, and if later the children want to know why you're doing that, well, you may say, "Ok, this is going on.".

Here it is also important to note the reference to personal values and moral principles that are used to justify Dalia's posture, which is also present within Gardenia's narrative.

The notion of living in harmony with the cosmos also connects to health and wellbeing discourse through the idea of salutogenesis. On the one hand, this serves to create a link between EE and wellbeing, which is presented as a core component of pedagogy, as Gardenia commented:

> This pedagogy, what it aims for is health. Hence, instead of going towards illness we go towards health, this is called salutogenesis.

On the other hand, the discourse of health and wellbeing ties with the premise that addressing unhealthy or problematic aspects at the preschool is not expected. To this regard Gardenia explained:

> As an adult I know that they [environmental problems] exist but this pedagogy what it aims for is health. Hence, instead of going towards illness we go towards health. Really, what I see in traditional education is that they live pretty much from concepts that in the end have no sense and are death, rather than having alive experience.

This view again champions learning by experience, while also associating traditional education with conceptual learning and positioning it as unnecessary. Furthermore, these assumptions link to another core assumption among the teachers, which is that children should learn only what is good, beautiful, and true. For instance, teacher Eugenia said:

Being Waldorf pedagogy—and at the kindergarten particularly—we do not focus so much on talking specifically about the problems, but what we do is give children beautiful images so that from these images they can contemplate beauty without this need that human beings have of possessing it, acquiring it, or destroying it. From these images, we make them respect life, respect the other, and respect what is there: from the ant that is super small to the cocoon that is emerging and the tree.

Finally, it is important to note that goodness, health and enjoyment are also directly linked with the arts, albeit, understood from an aesthetic viewpoint, as Gardenia explained:

In the Waldorf pedagogy everything is closely linked to the beauty aspect, not so much with the look but with the intrinsic beauty of things...with the arts.

The relevance given to the aesthetic aspects of learning also relates to the emphasis placed on experiential learning, which, together with the reference to health and wellbeing, is used to construct a posture against EE approaches that include teaching about the environment, particularly environmental problems. In this sense, the view of EE as living in harmony with the environment can be summarised as one that centres only on experiential learning and aesthetic aspects of the environment while rejecting any form of formal teaching.

5.1.3. Sustainability as EE

Sustainability was understood as a synonym for EE, and teachers did not elaborate much. Their answers were simply that both concepts were interrelated. Eugenia, however, explained the following:

Sustainability is the same as EE… Like, what I used to do at PROFEPA[16] was to raise awareness about what is around us in terms of flora, fauna and the ecosystem of people. For example, the type of weather it has and, what it can give and how we can make use of it but in a more conscious way. They [PROFEPA] call it sustainability, applied to each region.

---

[16]By its acronym in Spanish, the Procuraduría Federal de Protección al Ambiente (PROFEPA) is the federal attorney for environmental protection in Mexico.

In this example, sustainability is understood in terms of adequate use of local resources but is not directly linked with educational or pedagogical aspects. In this sense, it is relevant to note that Eugenia did not refer to the Waldorf pedagogy as the source for her understanding of sustainability; instead, she alluded to previous work experience in a government institution. This response can be linked to the historical and contextual aspects surrounding the use of the term sustainability in Mexico, which, as explained earlier, is not very common and is often associated with governmental institutions or international organisations but not with ECEC at first sight. In the next section I move to explore how EE looks in practice.

5.1.4. EE in Practice at the Waldorf Preschool

Actions oriented towards experiencing and practising a seemingly more ecological lifestyle rather than talking about it or formally teaching about the environment were the way EE was tackled at the Waldorf Preschool. This means that EE was to some extent embedded in everyday routines and was also reflected in the use of the space. A typical day at the Waldorf preschool includes activities such as free play, cooking, cleaning, playing outdoors, visiting a nearby farm, lunch time with a vegetarian menu only, circle and story time, singing songs, and nap time. The routine at the Waldorf preschool is organised around the notion of the rhythms of the day. Gardenia explained to me that the idea is that what children do at the preschool resembles the process of expansion and contraction characteristic of breathing. In that sense, children expand when they are outside and contract when they come back inside. Similarly, their annual planning is based on the season of the year, and this is reflected in the contents of the stories and the interior design of the preschool.

I identified three key aspects related to EE: The importance of place and bonding with nature, eco-design, visits to the farm, and picking up rubbish walks. There were also other quotidian practices associated with the notion of EE as a lifestyle, such as opting for vegetarian meals, separating food waste for the compost, and singing songs and inviting children to be part of rituals alluding to nature and the seasons of the year. Importantly, there were not any specific topics, lessons, or subjects aimed at learning or teaching about EE. Notably, despite the various activities oriented towards living in harmony with the environment and the actions related to tackling

environmental problems, there was a remarkable reluctance to trigger conversations or reflections with children about their experiences, interests, or worries.

The importance of Place and Bonding with Nature

Being in closer contact with nature was a fundamental aspect of the Waldorf preschool. In this regard, it is relevant to note that the Waldorf preschool used to be in a different place near a natural reserve, but Gardenia and her associate decided to move because the land surrounding the school was sold and houses started to be built, preventing the school from having easy access to a natural, untamed landscape.

The location and the way the new preschool were built are of utmost importance for the aim of being in closer contact with nature. As mentioned earlier, the Waldorf Preschool is in the middle of the jungle, and access to the setting can be difficult as there is no public transport going all the way there and the road is not fully paved. Place is therefore part of the ethos, which also shapes practice, as Gardenia explained:

> We wanted to build the school in the middle of the jungle… We wanted to care and create awareness about environmental care here, so we said, "If we want to build a school, we are not going to cut down all trees." That is generally what happens here; they cut down all the trees, and then they plant them again! That's what construction sites do. We didn't want that because we have seen the devastation that has happened in this area, and so we said, "We want to be a good example; let's do this by showing a good example through our actions."

This example shows how the idea of EE as a lifestyle and other associated principles such as teaching by example and bonding with nature was present in the school's ethos from the start to the extent that it made a difference in the location chosen and the way the preschool was built. Likewise, it evidences the significance given to being away from urban development and the busy rhythms of a city in order to be in close contact with nature. Here, it is important to note the parallels between these ideas and the romantic discourses of a pristine environment that place the connection to nature and reproduce the narrative of protecting children from modern society.

Associated with the location and the importance given to being surrounded by nature, spending time outdoors and bonding with nature was a very common practice. Every day, children spend at least two hours outdoors in the play area, which is surrounded by trees, flowers, and natural materials. Playing outdoors was very common and was a very good opportunity for children to develop their motor skills. Children could make use of the playground, run, climb and jump from a rope on their own, or play with their peers (Figure 8 and Figure 9). Some of the games that children used to play outdoors included hide and seek and role play, in which the children pretended to be scavengers or drivers of a rubbish collection truck.

Figure 8. Child jumping from a rope

Figure 9. Children playing outdoors

A relevant aspect is that during this time teachers let children play on their own and their intervention was minimal. Very often, while children were playing outdoors, the teachers opted for siting nearby but trying not to interact with children or interfere with their games. Instead, during free play teachers did activities such as knitting or handcrafts.

Eco-design

A core aspect connected to the notion of living in harmony with the environment relates to the spatial and physical aspects of the preschool, specifically the architecture and the design. The school was constructed considering the characteristics of the place as well as anthroposophical principles. The classrooms have round shapes, and they are built in a way that resembles more of a house than a standard classroom. Everything is made using natural materials such as wood and rocks. Gardenia explained that the architecture plays a fundamental role in transmitting the message of being a good example of an ecological school:

> We decided to build an ecological school, use biodigesters and solar panels, and avoid cutting down trees... If you see this place, only a few trees were sacrificed, our classrooms do not have two floors, they are small, all the wood used came from the same trees that were cut

down…the ceilings are made from *sascab*, a type of soil that has been used for years in this region.

The features of the building and the interior design appear to have a direct impact on practice, as these connect with specific pedagogical assumptions and beliefs expressed by the teachers. In other words, the physical space becomes a materialisation of key pedagogical principles in practice, as can be seen in the following extract from the interview with Gardenia:

> The idea of harmony is reflected in the aesthetics, as the decoration is trying to simulate a beautiful and warm environment in which children can live for the first seven years.

This explanation also serves to connect architecture and design with the aesthetic dimension of EE and the idea of protecting children.

Another relevant aspect is how the attention given to the architecture, design and decoration of the preschool evidence once again a strong influence of Steiner's ideas, not only on teachers' narratives of but also on the actual use of space and visual aspects of the classroom and the outdoors.

Visits To the Farm and Picking Up Rubbish Walks

Another activity that allowed children to bond with nature and particularly to interact with animals were the visits to a nearby farm. The farm was not part of the preschool, it was managed by a family from a lower income background. The animals at the farm included horses, cows, bulls, ducks and even a monkey, some of which were seeming ill. The following extract from field notes describes a typical visit to the farm:

> Children changed their shoes for boots and the teacher asked one of the children to carry a small backpack with water and some fruit for the group. On the way to the farm some children enjoyed jumping on muddy puddles or collecting objects like rocks or leaves. Once in the farm, the children and the teacher were welcomed by Teresa, a girl of approximately 9 years of age who lived on the farm. She knew all the children's names and usually would tell them what to do and how. The farm and the animals living there seemed to be in poor conditions, and I noticed the monkey had a leash, possibly to stop it from running away.

At the entrance there were chickens and ducks and at the back there were horses and bulls. Teresa distributed animal food and asked the children to feed the animals. Some children seemed confident and excited, but others did not seem to enjoy the activity and look scared. After the visit, children washed their hands with water and then sat down outside the house to eat the fruit and drink the water that one of the children was carrying. The teacher was the one distributing the food and drinks and children would ask her for a little bit more. Other than that, there were not conversations, comments or idea dropping, it was just sitting there and eating. I noticed some children were whispering things and sometimes trying to play with their peers but very often teacher Dalia would ask them to stop.

(Field notes)

The pickup litter walks took place on the same road leading to the farm and happen in a very similar way, except that for this activity the teacher gave plastic bags to the children before starting the walk; these were reused plastic bags from the supermarket or from other products rather than new bags. The following extract from my field notes shows how these walks commonly occurred:

The teacher said the names of the children who were going to go outside to collect rubbish. Children put on their boots and the backpack was given to one of the children. The teacher did not explain much, but it seemed the children were used to this activity, and they knew what to do. The children went outside and some of them immediately started collecting rubbish and even playing with other children to see who was collecting more rubbish. Other children seemed a bit distracted and instead were collecting sticks or stepping in puddles. When the teacher saw that she simply said they were here to pick up rubbish.

Two children moved a bit away from the group where there was a bunch of rubbish. It was shocking to see the amount of rubbish (mainly plastic) that was there even when the preschool was located far away from the city. During the whole walk the teacher did not raise any questions or got involved in children's conversations, she was just quietly observing and making sure the children were actually picking up rubbish. After the pickup activity was over, we all walked back to the preschool, mainly in silence, although some children were playing around.

(Field notes)

This scenario, however, is not uncommon and reflects the severity of issues around littering and waste management in the region. Such conditions evidence how children are inevitably being exposed and surrounded by these typical socio-environmental problems. Related to this aspect during one of the walks the following happened:

> Dalia gave each child a plastic bag. Some children seemed to be very excited, one of the youngest ones exclaimed: Rubbish! Rubbish! Pointing at a pile of rubbish on the side of the pathway.
> I noticed two of the oldest boys were really interested in collecting as much rubbish as possible. I suddenly heard one of the boys say:
> **Boy 1:** the world is polluted
> **Boy 2:** The world is polluting! Is all polluted.
> **Boy 1**: No! the world is not polluting; humans are polluting it and is not all polluted.
>
> I decided to get closer and then I asked:
>
> **Adriana:** What do you think of that?
> **Boy 1:** That is bad, with rubbish like plastic, animals can die, like these [pointing at plastic bottles caps] if they go to the sea, turtles could eat it and die.
> Is there something we can do? I asked, and he replied: - Litter less and pick up rubbish.
> How do you know all this? I asked him, and he said: My mom told me, and I saw on TV there is a TV show about that.
>
> (Field notes)

It is interesting to see how the children talk about socio-environmental problems in a rather spontaneous ways and how one of the boys seems to correct the other, suggesting that he already has some knowledge about the problem and that this is something that is also talked about at home. Notably, the teacher did not intervene, instead she told the group they needed to keep on moving as they had to go back to the preschool soon. After the walk finished nothing else was said about it.

This absence of reflection or conversations between children and teachers was not an isolated event. Overall, in practice, verbal explanations or communication with the children were limited. During my visits I noticed that, even when children and adults

156

shared tasks such as cooking, cleaning, setting the table or walking, there were very few chances for the children to establish a conversation with adults or to speak about what they think or feel. This avoidance was particularly evident during the visits to the farm and the pickup litter walks and the reluctance to do so is related to the idea of teaching what is good, beautiful and true. For instance, when I asked the teachers about this lack of conversations, they explain that it was intentional and had to do with Waldorf pedagogical principles, to this regard Dalia argued:

> Conversations, no. With children, it's more important to listen in order to know…it's more important to stay behind and see how they integrate and get to deduce and create ideas from their own experience, we do this because of the pedagogy…

> For instance, when we were in the other campus a machine came and started cutting down trees [in the estate next to the school]. The children heard the noise of the machine, trees breaking and falling, birds flying away everywhere, and all the noise. But no one said anything; we didn't talk about it. We [teachers] were not going to ask the children: "How do you feel about the jungle being destroyed?" Yet, as we are always watching, we could see that they knew something was going on, because it is pretty obvious, and there were some children that didn't want to go outside because they were scared.

Similarly, using the same example, Eugenia explained:

> When that happened, I was able to see that, without having to tell them that something bad is happening, they associate it with the idea that something not good is happening and what is going on is not correct.

It is interesting to note how Eugenia uses the phrase not-good instead of bad or problem and how Dalia uses the argument of this situation being obvious as a justification not to talk about it. A similar logic was used to explain the lack of conversation or interaction with children during the walks:

> **Adriana:** So, do you think children are aware of the rubbish problem?
> **Dalia:** When I walk with the children, they always tell me to look at this rubbish here, or someone left a lot of rubbish. They realise that they can hurt themselves with objects that are in places that shouldn't be. And then they themselves realise that it looks bad. So sometimes they say it [the rubbish] smells bad and things like that, they, by themselves realise that it should not be there, that it does not embellish or anything like that it has

no function. So, they are interested in picking it up and putting it where it goes, that's it.

As seen above this narrative does not address the problem of pollution or littering directly, instead it frames rubbish as non-aesthetical issue and as a risk for children. The emphasis on the aesthetical aspect seems to remove attention from the fact that these types of environmental problems affect and interest children, while the reluctance to address this evident and problematic situation and take this as an opportunity for children to reflect or learn seems to be related to the idea of shielding children from complex and problematic topics. Moreover, the emphasis given to avoiding explanations or questions prompted by the teachers also shows parallels with the notion of negative education.

Overall, the teachers at the Waldorf preschool emphasised both at the discursive and practical level, the idea of EE as a lifestyle at the centre. This understanding was the dominant one at the Waldorf preschool and it was based on the idea that the aim of EE is to live in harmony with the environment, thus the emphasis was on everyday activities as opposed to formal lessons or teaching. Likewise, the connection to nature discourse linked to spirituality had a central place within this conception of EE. This perspective shows a parallel with education in the environment approaches in that the emphasis is on bonding with nature, experiencing it and appreciating it rather than learning about it. Although there were activities that can be associated with education for the environment and which involved children, these were paradoxically not seen as such since children's voices, input and reflection were not encouraged or fully recognised. I will expand on this aspect further in chapter 8 when I analyse the images of childhood in more detail. Now, I move to present the findings of the second case study: the City Preschool.

5.2. The City Preschool and the Botany club: EE as an Extracurricular Activity

At the City Preschool, EE was viewed at both the discursive and practical levels as an extracurricular activity. The dominant view of EE can be summarised as taking care of the place where you live, and this view encompasses aspects such as assuming personal responsibility, learning to make good use of local resources, creating awareness, and learning about environmental problems through specific

projects or lessons. This interpretation is connected to an understanding of the environment as the place where one lives, which incorporates a view of the environment as both natural and human-made but also as a problematic place. The main EE practices found at the City Preschool were the botany club and reusing or upcycling.

In the following sub-sections, I explain each of these aspects, starting with the findings around teachers' understandings of key terms (environment, EE and sustainability) and later addressing what EE looks like in practice. It is important to note that the term sustainability was unfamiliar to the teachers to the point that it did not evoke any interpretations. In this sense, sustainability is still an absent term in this context. Overall, the interpretations and mostly the practices observed at the City Preschool align with the education about the environment approach because of the emphasis given to learning specific content about the natural world, which happened mostly through lecture-like activities. Figure 10 summarises the findings.
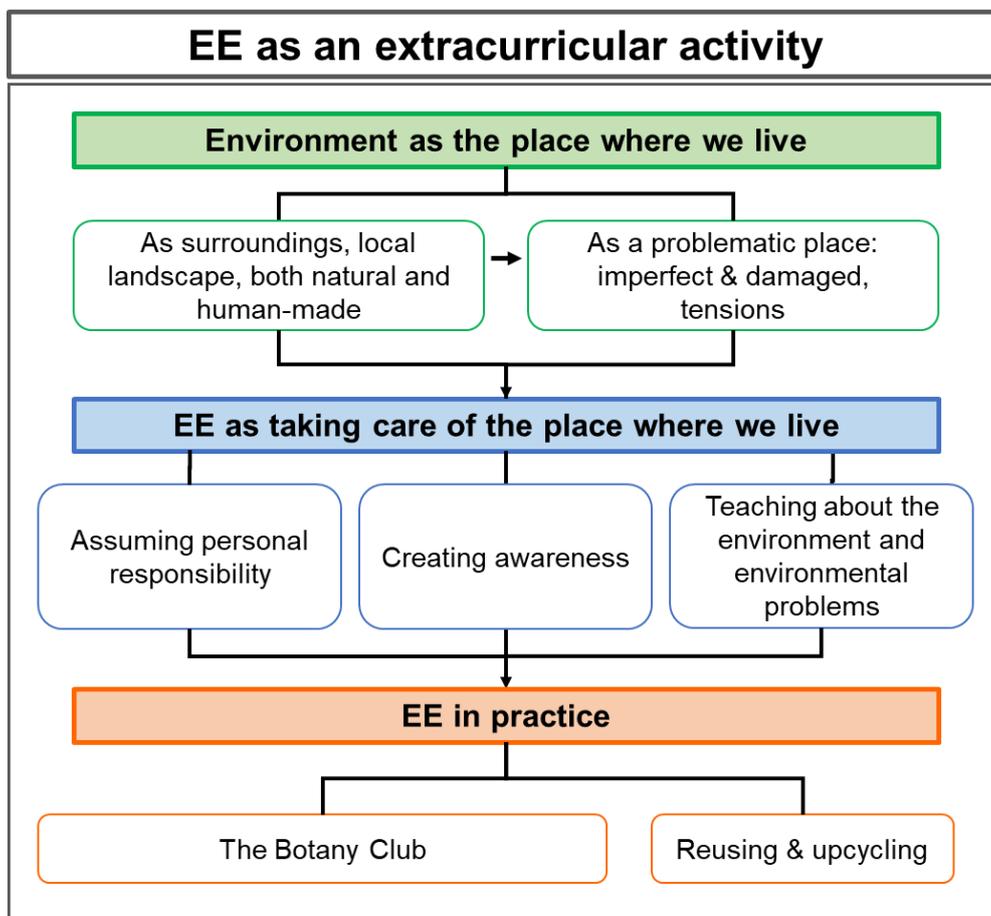
Figure 10. EE as an extracurricular activity at the City Preschool

5.2.1. Environment as The Place Where We Live: The Intersection of the Natural and the Built Environment

A central element in this interpretation is the notion of environment as surroundings which encompasses elements from both the natural and the built environment. Likewise, this understanding of the environment highlights elements that form part of a tropical landscape, such as the beach and the jungle, thus revealing a local view of the environment that is influenced by the geographical characteristics of the place where the participants live. Azalea, the pedagogue, for instance said:

> The environment is everything around us, all the contact that we have with the natural part and the not-so natural, but in the end is what surrounds us and forms part of my context.

This example shows how even when Azalea differentiates between the natural and the built environment, she also acknowledges that these cannot be separated from each other. What is more, by framing the environment as the place where one lives, or 'my context', she portrays it as something she experiences and interacts with every day. In this sense, this is a picture that presents the environment as an immediate, interactive place that has been modified by humans, rather than as a distant, pristine, or wild place.

Lily, the principal of the City Preschool, elaborated more on the differences between the natural and built environment by reflecting on the use of two different terms in Spanish *ambiente* and *medioambiente* as seen in the following extract from the interview:

> Ambiente is the place where we are and develop…as our surrounding…but I think in this case, medioambiente would be only the natural part, what nature offers, because we could differentiate that… ambiente as surroundings would be what we have created; for instance, I create the environment in my office, while medio ambiente is going out and seeing the green areas in the city or my state.

In this case *medioambiente* is interpreted as the natural, non-human created dimension of the environment while *ambiente*, is equalled to *surroundings*, and it encompasses the built or human dimension of the environment. By making the distinction and employing different terminology Lily draws attention to the multiplicity

of meanings around conceptions of the environment and brings about the idiosyncrasies of language. In Spanish, the term *ambiente* and *medioambiente* co-exist, but as Lily points out medioambiente is commonly used to refer specifically to the external, natural elements or landscape that are necessary for living beings, while *ambiente* has a broader scope. Thus, *medioambiente* often is associated with the outdoors, or the so-called natural world which refers to natural resources, living beings and green spaces. Although Lily sees the natural and the built environment as two different things, she recognises that these are interlinked, and they both construct the place where she lives.

5.2.2. Environment as a Problematic Place

Acknowledging the intersection between natural elements, humans and society opened a reflection about the way humans have modified the place where they live. This perspective exposed a complementary view of the environment as a place where socio-environmental problems occur. Felicia, the resident artist for instance commented during the interview:

> Environment it is the space where we live…It includes what is natural and what has been created by humans, and then we have to revert what has been created by men to save what is natural…our environment today is that…is the combination of what men has done for good or for bad, intentionally or unintentionally, together with what was already there.

Embedded in Felicia's interpretation of the environment as the place where one lives is a view of the environment as a damaged place that has not only been modified but mostly deteriorated by humans. She highlights the complex and often problematic ways in which humans interact with other living beings and their surroundings. It is interesting to note how she places humans in an active position as having the power to cause problems but also to solve them. Another example of this view of the environment as a place that is being deteriorated was given by teacher Sabina, the leader of the Sailors botany club:

> Environment is everything around us, including what's good or bad. It's the natural resources, plants, transformation, energy, the chemical and physical elements…how we use it and what we manage to change; what we destroy, defines what's good or bad.

161

Sabina's and Felicia's interpretations instead of presenting the environment as pure or wild portray it as inevitably mediated by human action. This view of the environment as a place that needs attention and protection therefore positions people as a destructive force while it also grants humans the possibility and responsibility to do something about it.

The interpretation of the environment connects with the idea that the purpose of EE should be to take care of the place where we live, which was the dominant perspective at the City Preschool which I will explore next.

5.2.3. EE as Taking Care of the Place Where We Live

This notion encompasses different meanings and covers diverse dimensions and currents, yet I identified three key aspects within the understanding of EE as taking care of the place where we live. First, teachers showed a tendency to think of EE in terms of assuming a personal responsibility and taking individual actions that could contribute to taking care of their locality thus deploying a sense of a duty of care and emphasising the regional aspects of EE. A second aspect is rooted in the idea of creating awareness of the use and misuse of natural resources specifically within the coastal region in which they live. A third aspect is related to teaching and learning about environmental problems and how to mitigate them. I expand on these ideas in the following sections.

Assuming Personal Responsibilities and Individual Actions

Some teachers used the expression 'contributing with a grain of sand' to emphasise the idea of individual actions and personal responsibility. For instance, Lily said that EE is:

> To educate ourselves about environmental care…to contribute with our little grain of sand of towards the care of the natural resources that we have, what the Earth and the place where we live offers to us…in this case the beaches…Take care of plants and sea animals and the different species that we have in our surroundings.

Azalea had a very similar view in that she also referred to the notion of 'contributing' to the environment from an individual perspective and she alluded to the local context, specifically the beach:

162

> [EE] is the formation of habits within everyday life in order to contribute to the environment that I have in front of me, according to my context, in this case, for instance, the beach… So, what sort of habits can I form that contribute to my environment in the context where I'm living.

Sabina also stressed the idea of assuming personal responsibility as key within EE:

> [EE] is about educating ourselves since we are little…is to learn how not to damage the environment which in the end means damaging ourselves... When I think about taking care of the environment the first thing that comes to my mind is people…it's like, it doesn't come from us, because we don't have that education.

As seen above, these interpretations of EE highlight the idea of caring *for* the environment and contributing or doing something for it from an individual perspective. The notion of the grain of sand in Lily's and Azalea's accounts, serves to depict the individual or micro level as the realm where they think something can be done to take care of the environment which links with a sense of self-responsibility and self-governance within a society.

The discourse of individual responsibility and assuming a duty of care is evident in Lily's and Sabina's narrative through the notion of self-education and within Azalea's account through the idea of forming habits. Moreover, Sabina deploys a connection between environmental care and self-care when she mentions that harming the environment is harming oneself, a view that highlights not only the personal dimension within EE but also a moral responsibility.

Creating Awareness About the Use of Resources

Another interpretation of EE closely related to the one presented above, revolved around the idea of creating awareness about the use of natural resources or avoiding waste. Such interpretation highlights EE in more managerial terms as the emphasis is on learning to administrate or use resources to make the most out of them. To exemplify:

> [EE] It's about making good use of things, at a 100% to avoid wasting or investing on things that are not so necessary. Really, we are not aware of that…we could avoid wasting so much if we knew how to make good use of things…Is recycling, using the 3 R's, caring about energy, no to pollution of the soil, air, or water. It's like abstaining from doing what's

bad…for instance, as mom, I'm constantly telling my child to turn off the lights, close the tap…

(Sabina, City Preschool teacher)

The allusion to terms such as resources, flora, fauna, ecosystem and use of resources and the emphasis given to avoiding damage or waste shows the influence of conservationist discourse of EE where the environment is seen as a supply that can and needs to be properly managed to conserve it.

In this example Sabina positions people as stewards who can also influence others by showing what should be done in an attempt to raise awareness about environmental care. Sabina's interpretation also links awareness with knowledge. In that sense, under this view, to become aware one should gain knowledge about the resources that are available in a particular region, acquire practical knowledge about how to use them and develop a sense of responsibility to manage resources wisely. As such, knowledge appears as the basis for adopting behaviours that could help to conserve the environment (i.e. make good use of it), which echoes pro-environmental discourses of EE.

Sabina constructed an interpretation of EE using examples of personal experiences at home and referring to her daughter. Her account shows how she is trying to teach her child about the proper or good use of resources by telling her what to do or not to do. The way she frames these conducts as "abstaining from doing what is bad" reflects a practical yet prescriptive view of EE, understood from a factual and transmissive view, rather than as a reflective or participative process.

Sabina's emphasis on avoiding waste and saving energy at home shows links between pro-environmental behaviour and the impact that this might have for household economy. The reference to family life situations also suggests that her understanding of EE is closely related to her own personal and family experiences and not necessarily to her academic or professional background.

Teaching About Environmental Problems

Teaching about problems that have a negative impact on their locality was seen as an important aim of EE at the City Preschool. The following extract from the interview with Lily exemplifies this view:

But there's another way of caring—of doing environmental education, that has to do with learning about pollution. Not polluting the spaces where we live. That's also part of the care we must have.

Felicia also elaborated on the relevance of teaching about environmental problems:

Before, when everything was made from natural stuff there was no need to explain this type of things [to the children], but how important it is that we all know that, from today, until I don't know how many years, it's going to take a while to revert the damage, maybe by either changing the use of materials that harm the environment or waste collection, or recycling or what can we do? I don't really know, but I believe it has to be included… we have to re-educate ourselves and include environmental care in order to rescue the space we live in.

Besides, Felicia's view also deploys a reflexive and philosophical stand around how human lifestyles and context have changed over time and the causes and consequences of this:

I think EE is something that must have emerged from the lack of it. But I also think that, with all this recycling thing, I start wondering, I don't think that the intention of the human being that started to create all these materials that now damage the environment had a bad intention. I find that hard to believe, instead I think that many things emerged as a matter of practicality, as the world was starting to change...There came a time when everything was produced so fast, and now there's too much of everything and it wasn't anticipated that this could happen….

Lily and Felicia's accounts link the idea of learning about environmental problems with the notion of taking care of the environment, which suggest an understanding of EE that includes care, knowledge, concern and reflexion. These narratives are consistent with interpretations of the environment as a problematic place, where again the notion of humans as responsible for finding ways of solving the problem by changing old habits is highlighted. It is interesting to note that even when Felicia shows interest and a very reflexive stand, she also acknowledges the complexity of the problem and positions herself as unsure of how to act.

Another important aspect is that when talking about EE, the teachers used the pronoun we to refer to themselves and the children. Hence, when talking about assuming a personal responsibility or learning how to take care of the environment they were also referring to the children at the preschool.

In Felicia's view there is also an important narrative around transformation of the environment framed by time-space and models of development. Felicia's account emphasises the fact that the environment has changed with time, and she acknowledges that there is an environmental or socio-environmental crisis that is happening now and needs to be addressed or solved as soon as possible. Such argument serves to validate the relevance of teaching about environmental problems now, and why this might not have been so relevant in the past. Such interpretation also implies a notion of EE as a process that is not static but that changes and has to adapt to the current circumstances. In that sense, Felicia's ideas about 're-educating' portray EE as a different type of education to the one she received, one that must be adapted to the particular complex and worrying conditions in which we now live.

5.2.4. Sustainability: An Unknown Term

As I mentioned at the beginning of this section the term sustainability was not familiar to the teachers. Both teachers and other members of the academic staff commented that even when they have heard the concept before they were really not sure what it refers to, thus evidencing that the meaning of sustainability was unclear and confusing for them.

Azalea for instance said that she was confused about how to use the term even when she had heard it many times before:

Azalea: This is something we were talking about the other day at one of the Reggio events, I attended. But it wasn't very clear to me, when exactly you use the term, it really was not clear. Anyways, I do notice that they use these terms a lot.
Adriana: And what do you think it refers to? Do you have an idea?
Azalea: mmm, not really

Similarly, Sabina commented that she had heard of the term sustainability before, nevertheless, she did not think of it as something that was directly related to ECEC or her role as a preschool teacher. For instance, she said:

> **Adriana:** Are you familiar with the term sustainability?
> **Sabina:** No, my partner says it a lot, but honestly, I have never asked him.
> **Adriana:** But what you think it could mean?

Sabina: Really, I don't know, it sounds to me like renovation of something, something that has to do with materials or energy.

This last example suggest that sustainability is not only poorly understood but furthermore seen as a concept that does not belong to the education field let alone at preschool level.

Having presented the findings around understandings of key terms for the teachers the following sub-section focuses on the ways in which EE was tackled in practice.

5.2.5. EE in Practice at the City Preschool

Most of the activities related to EE took place at the botany club although there were other practices associated with EE such as recycling and upcycling. Given the prominence of the botany club for this research, I firstly provide a briefly explanation of what the club is and how it came to be at the City Preschool. Next, I present the type of activities that took place during the club and finally I address practices associated with recycling and upcycling.

The Botany Club

The idea of starting a botany club was prompted by the 2013 curricular reform that in 2017 through the so-called curricular autonomy, decreed that all basic education, including preschool level, should create curricular autonomy strategies also called clubs (see section 3.5.5 for more information about curricular autonomy). According to official regulations, clubs should be spaces to learn about specific areas of relevance chosen by the schools themselves based on their interests. clubs should be facilitated by the teachers, take place during the regular working hours and, whenever possible, allow children from different age groups to mix or interact in these clubs. clubs should be planned for a school year and can be reactivated, importantly, the curricular reform also states that "the students will have the freedom to decide to which club they want to join" (DOF, 2018).

The botany club at City Preschool derived from this curricular policy, along with other clubs such as dance, football, music and arts. The types of clubs were chosen by the teachers in collaboration with the principal, the pedagogue and the resident artist, taking into account teachers experience with their groups, teacher's and children'

interests and previous knowledge, as well as resources and spaces available at the preschool. To this regard, there were two important aspects that appeared to influence the decision of starting the botany club, one has to do with the available physical space and the other one with the leadership of the staff. This extract from the interview with Azalea helps to explain this point:

> About botany, well, we had been concerned about the garden beds being abandoned, and nobody wanted to work on them. I invited them [the teachers] and told them, "See, this is an area that we have, a resource that we are not taking advantage of." Then the teachers became motivated and said, "Well, we aren't experts, but we are going to read, do research, and go ahead with it."

Similarly, Sabina, highlighted the relevance of the physical space while at the same time stressed the importance of including children and parents in this process and having their support:

> When they told us about the clubs, we said, "Okay, let's see who's got talent for something." Honestly, I don't think I'm good at many things, but I always try to make an effort. I'm not so good at dancing or music, so what was left was the big backyard. So, what's there? the garden beds. So, we said, "Well, it is related to the new curriculum; we have the resources— well, not all of them, but most of them—and we do have the availability, disposition, and support from parents and the interest from children," and so we said, "Well, why not botany?" Maybe I'll learn something, because it is also about educating yourself and trying to learn or re-learn new things.

The fact that EE is framed as a club is a clear indicator that it is seen as an extracurricular activity that is also optional. The way the botany club started and the reasons behind it reveal that taking care of the environment was seen as a new topic for the teachers. Moreover, it was initially regarded as the least appealing option for many, thus pointing out the initial lack of interest and knowledge. Nevertheless, it is worth noticing that the teachers who decided to become leaders of the botany club showed openness and willingness to try something new, even when this represented a challenge for them.

Setting the Scene and Getting Started

The club started formally in late October (almost 2 months after the start of the academic year) and took place twice a week; each session lasted an hour and a half.

Given the number of children and staff and the characteristics of the preschool, instead of mixing different age groups as the regulation suggests, it was agreed to mix different classes. Therefore, there were three botany clubs, one per age group. Each botany club had children of similar age but from different classes, and there was a teacher leading each of the clubs. As mentioned earlier, I conducted my study only with teachers and children from two preschool groups, namely the Discoverers and Sailors groups (see the list of participants in section 4.5).

As leaders of this club, Jasmin and Sabina had to prepare a written proposal specifying the aims of the club and write a lesson plan, which was handed in to the head teacher. Initially, the teachers had named the club 'Stewards of the Environment', yet in practice they called it the botany club (see Annex VIII). The aims of the club as originally stated by the teachers were:

- to raise children's awareness about environmental care through practices of reforestation and recycling;

- to foster coexistence and solidarity values among children and understand their importance;

- that the child recognises the social actions that promote environmental care;

- that the child be capable of proposing measures of care and protection by realising the impact of their own actions on the environment.

Through the initial aims of the club written by teachers, it is possible to see the emphasis given to children as learners who play an active role in taking care of the environment, with an accent on becoming aware of their own actions.

The concepts of recycling and reforestation need some clarification here, as teachers tend to use the term recycling to refer to reusing, and reforestation means planting and creating a garden inside the preschool.

So far, I have briefly stated the way the botany club emerged and the main principles that guide it. Next, I will expand on the sort of activities that occurred in practice as part of the club. These activities are presented in the same order in which they occurred in practice; I organised them into three subheadings, each of which represents a stage of the botany club. The set of activities corresponds to the initial stage of the club, where the focus was on learning about plants and what botany means. The second stage of the club moved toward a more hands-on approach

which centred on exploring, experimenting and experiencing a closer contact with plants by trying to spend more time outdoors observing, touching and later planting a garden. The third stage of the club focused on maintaining the garden and protecting it. In the following sections I explain each of these stages and the correspondent activities. Annex IX summarises the botany club sessions and activities held at the City Preschool.

Stage 1: Learning About the Environment: Learning About Plants

The initial stage of the club took place mainly indoors and it focused on conceptual and theoretical learning. The activities carried out included topics such as what is botany, parts of the plant and the life cycle of plant among others (see Annex IX). During the initial stages the botany club seemed more like a sciences lesson since the emphasis was on learning facts and concepts about plants, as can be seen in this extract from my field notes:

> While children and teachers are sitting down forming a circle at the assembly teacher Jasmín asks: "So, what is botany?" Mónica, one of the girls immediately says: "it is the science that studies plants" another boy says: "plants are living beings", while other children interrupt and say things like they are alive because they feel, immediately Mónica comments: "and they are alive because they are born, grow and reproduce", other children start saying similar things.
> The teacher then explains that today they will learn about the structure of the plant and asks the children if they know what the parts of a plant are and shows a picture (see Figure 13). She then hands the picture to one of the children next to her and asks children if they know what the parts of a plant are.
> Mónica raises her hand again and says: "plants have root, stem, leaves and flowers". The teacher seems a bit surprised and enthusiastically says: "well done Mónica! Now why don't you come to the centre and explain that again to your classmates".

This extract shows the emphasis given to factual knowledge and inquiry-based learning approaches at the botany club, it also exemplifies how the idea of transmitting knowledge is championed and children are expected to reproduce this type of strategy, thus it is not only the teacher who transmits specific knowledge, children start taking that role too. In this case, Mónica reproduces this teaching-learning process assuming the role of the one who transmits knowledge and acting

as the protagonist. This type of actions happened regularly at the club and allowed children to express and share what they know with their teachers and their peers. Yet, this also meant that some children felt less confident speaking in front of the class were to some extent left behind.

Influenced by the Reggio Emilia approach each classroom had a space called assembly which purpose is to facilitate a dialogue between teachers and children and discuss relevant matters for them. During the botany club, the assembly space served a different purpose as teachers commonly used this space to sit down on the floor and give short lectures which were mainly informative and seek to teach children different concepts about plants and living beings. Children were invited to share their previous knowledge, ideas and experiences about different topics related to the botany club. Yet most of the time it was the teacher showing diagrams and explaining things such as what is botany, the different types of plants and parts of the plants. The following extract from my field notes exemplifies this:

> The teachers started the sessions talking to the children about the parts of the plant. They used diagrams and made drawings on the white board. Children were then asked to go to the small tables and colour in drawings or solve jigsaw puzzles of the parts of the plants (see and Figure 12 and 12).

> A few minutes before the session was over the teachers went around to see the children's drawings and ask them what they have done or what was their picture about and wrote what the child said on the edges of the page. The children then returned to the assembly space inside the classroom and teachers invited children to present to their classmates what they have done.

Figure 11. Children colouring a diagram of a plant
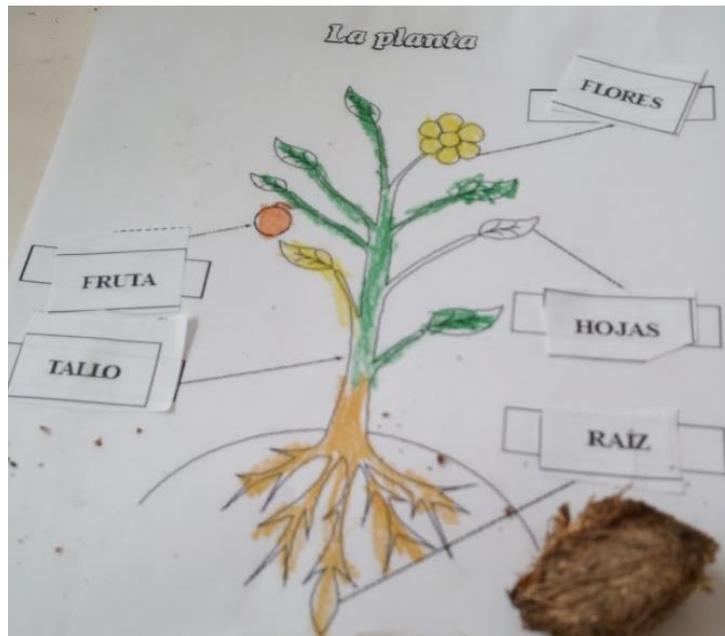
Figure 12. Diagram of a plant with names

The activities, the content and the emphasis given to passing on factual knowledge and introducing concepts about plants at the initial stages of the botany club is consistent with the idea of education about the environment with an emphasis on the objects of study and the aim was that children acquired knowledge in environmental natural sciences or a science base approach. natural sciences or a science base approach. In this case, plants were seen as or natural sciences, in this instance botany. A direct teaching/instruction approach that encouraged attention, repetition and demonstrable knowledge dominated the first stage of the botany club, and the next sessions had almost the same structure (short lecture by teacher) followed by a question-and-answer session with the children in the assembly and then moving to small tables to do an activity such as colouring, drawing, cutting or pasting. In these instances, children were expected to recall what the teacher had taught. One of the sessions for example centred on teaching the life cycle of plants and it happen like this:

> Similar to the previous sessions, the teachers addressed the topic of the life cycle of a plant. They started by giving a short lecture in which the teacher explained that plants not only have different parts, but they also grow, develop and die (See Figure 13). The teacher used diagrams to illustrate this process and made emphasis on the fact that plants are alive and therefore are living beings. She then invited some children to draw on the whiteboard. After the short lecture, the teacher asked children to

colour in diagrams and then cut and paste it in the right sequence to show how a plant is born, how it develops and then dies.

(Field notes)

Figure 13. Diagram of the life cycle of a plant used by teachers

For the teachers, giving children the opportunity to show their work and share their ideas was other children was really important, this happened mainly at the assembly. To this respect, teacher Jasmín explained:

> There are children who participate more, for example Mónica, she is in love with plants, plus she has been learning about that with her class, so we always encourage her and tell her: -you are going to help us, you must come to the botany club because you help us a lot with this club, the club would not be the same without you.
> Because when she participates, she motivates other children…everyone listens to her, and they repeat what she says. You can tell that she knows a lot, she really likes botany.

These examples show the value that verbal communication has for teachers and children in an environment structured around acquiring and transmitting information (including new vocabulary and concepts). In this context, Jasmin recognises Mónica as a knowledgeable person who is capable of making an important contribution to the class, in that sense Jasmin sees Mónica as a helper which means that Monica's participation was important not just for children's learning or development but also for the teacher. However, this evidences that teaching and participation are interpreted as repeating concepts and giving the right answers, hence children in class participation attends merely to a transmissive function and not necessarily to a

173

democratic aspect (which is what is normally expected in a Reggio Emilia preschool).

Generally, children seemed confident and very excited about sharing what they know and taking part in discussions with their peers and the teachers. However, the emphasis given to factual knowledge and active participation in front of the group meant that some children participated more than others. Children who were a bit shy were often left behind and tended to get distracted during the lessons.

Stage 2: Learning outdoors: hands-on experience

Differently from the initial stage, the second part of the botany club, which I refer to as hands-on experience, had a distinct approach. Although the idea of gaining knowledge prevailed, the emphasis was not so much on sharing facts or scientific information about plants but on experiential and sensorial learning in direct contact with plants, trees and natural elements. As such, teachers encouraged children to experiment, sense and actively participate in practical activities that required children to go outside, observe, touch, smell, dig or clean. Planting seeds in a cup, making grass heads and creating a garden are an example of these type of hands-on activities (see sessions five to seven in Annex VIII). Moreover, in terms of the didactic strategies employed these were mainly sensorial, cognitive, experiential and included creative or artistic aspects.

To this regard, Sabina explained that one of the goals of the botany club, should be that "children live, experiment and construct knowledge from hands-on experiences" and later, she added that this could be done by spending time outdoors:

> Being outdoors allows them to improve many things. For instance…the textures, the sensations; when you take them out you kind of force them to feel, to perceive …it doesn't matter if they get muddy or something like that, just let them be outside and live the moment.

Spending time outdoors was particularly relevant to fulfil the aims of this stage of the botany club, however, it was not an easy task for the teachers, as Jasmín explained:

> Initially, our idea was to do everything in the backyard because the aim of the club was to be outdoors so children get to know the space where they will be working and learning about botany. But for us this was a real challenge, that is why we decided to first work inside the classroom the theory part and explain to them what botany is, or the parts of the plant

and how to make their puzzle, because the backyard was totally distracting factor for them, that's why we couldn't spend that much time outdoors.

Similarly, Sabina said:

Classes are generally expected to happen inside the classroom, but I say, if this [botany] is about the outdoors, why keeping them inside. Yet, there are days in which you identify the mood of the group: they are dynamic [restless] when they are like that is like: Hey c'mon everyone [pay attention]! But when there is a positive response of the group, then, why not going outside.

Spending time outdoors represented a challenge for the teachers because it is a practice they were not used to. Therefore, letting children outside appears as a matter of control, power and freedom. These worries affected the way the botany club developed, particularly for Jasmín who found it difficult to have her whole group outside. To this regard she explained:

The first classes were chaotic! Because half of them were gone [i.e. children got distracted with other things in the backyard]. The ones that have more energy, they saw park and thought: Ahh I'm free! Now, instead, we see that we are able to have an activity outdoors, but we must keep them active! Today for example, we had a good result by keeping them all busy helping to clean the garden beds. We saw that they actually did it! A few did get distracted but not completely…they were there, interested in what they were doing.
What follows then is to keep trying to be here [outdoors], because really it is their space…we are all the time inside the classroom and even when we like it or not, children might lose interest because they are all the time inside the classroom, all the time working here! But if we take them outdoors, wow! This is another space, is another way of working that now we can see that, yes! We are doing it little by little and is starting to work.

As seen, initially, for Jasmin being outdoors represented the idea of freedom yet at the same time freedom was associated with losing control of her group. The notion of freedom is associated with children not following certain rules. In this sense, children's freedom is portrayed as problematic or disruptive for the preestablished goals of the session. The classroom, conversely, is portrayed as a place where children can be managed and contained better, and it is framed as the usual way of teaching.

It is important to note that at the City Preschool the aim of spending time outdoors was not to enjoy or bond with nature, but to improve children's experiential and sensorial knowledge which in turn were seen as necessary to accomplish the goals of the botany club.

Another aspect to highlight is again the relevance of space and the links it has with offering different ways of teaching and learning. Jasmin's account allows us to see a possibility of change in how she used to see the outdoors and how she started modifying her practices to allow children to spend more time outdoors. This example also shows how despite not feeling very comfortable being outdoors with her group, she considers children's interest and needs, even when this might pose a challenge for her.

Stage 3: Garden Based Learning: Protecting the Plants

The creation of the garden at the City Preschool prompted different situations that required teachers and children to spend time outside experiencing and learning about plants but also looking after the garden.

The third stage of the botany club steered by the circumstances or problems that arise after planting the garden, such as plants dying or being damaged by other children. The teachers explained that after finishing the garden they had been struggling to keep it alive because some children, mostly the youngest ones had been throwing objects, cutting the plants or stepping on them. Therefore, teachers started to tell children they should look after their garden and that if they ever see someone harming it, they should tell them not to do so. In that sense, the activities that took place at this stage were less structured and were oriented towards keeping the garden alive, with a more practical focus. Related to these events the teacher Sabina explained:

> There are children from the botany club that see other younger children pulling up the plants and they run and say: Don't touch it! So, it's like they care about things they used to ignore…they come and tell me, teacher I have watered the plants in my garden, they're getting bigger… at least they now have this awareness that plants need care, you need to water them and avoid pulling them.

Similarly, Jasmin said:

> We have seen that there are children that start playing with the plants, they break the flowers and the stems…therefore, what I do in botany, for example is telling the children: you kids, since you belong to the botany club, whenever you see other children [damaging the plants], reach them and tell them: 'Friend, I am from the botany club and I look after the plants, do not break it, it hurts it, remember they are living beings'. So that they, little by little… can invite other children to take care of the environment.

These examples show how the notion of care is connected to creating awareness and protection, and this is then linked to generating a change in children's behaviour. Following this narrative, taking small pro-environmental actions to prevent the damage was very important. The teachers were keen to encourage the children from the botany club to stop other children from damaging their garden. The way in which the messages about taking care of the plants were transmitted suggest that teachers allowed and expected children to firstly, actively care for the garden by maintaining and secondly to stop other children from damaging the garden, thus positioning the children from the botany club as stewards or guardians of their garden.

Moreover, the narrative around owning the garden, belonging to or being part of the botany club together with the idea of protecting plants and avoiding harm has a moral and normative dimension. Such tendency is clear in Jasmin's account, when she links the idea of taking care of the plants with being part of the botany club. In that sense, looking after the garden was embedded in the idea of a duty of care that at the same time was endorsed by belonging to the botany club. Actions such as watering or keeping the area clean became part of the 'taking care of' discourse which ultimately seek to keep plants alive:

> One aspect that we have in botany is taking care of the environment. And how do we do this? By looking after the garden…we are emphasising this a lot with the children, that we are going to create our garden and just as we are cleaning it now, we must keep it clean so plants can live.

The botany club and the plants acquired value for being relevant aspects in the everyday lives of children and teachers at the preschool.

It is important to note that the botany club continued after I left as it was planned to be a long-term project. I was told that the next aims of the club would be to continue with the garden and make a presentation about the work they had done with

vegetable garden and later, to address topics related with waste management. Indeed, a few months later when I had returned to the UK, one of the teachers shared with me some pictures of the garden and the children's latest work where they were learning about classifying waste.

5.2.6. Reusing and Upcycling

Reusing and upcycling were very popular and outstanding practices at the City Preschool, this was evident in many spaces around the preschool. For instance, the lobby or main entrance functioned as reception and space for art displays. Moreover, at the back playground there is a small area with built in garden beds. This space is more rustic than the front playground as it is not covered with concrete, only soil and there are big trees and a few games made of re-used materials such as tires, bottles, or PVC pipe tubes. Around the preschool there are also planters made of similar materials (see Annex X).

As I mentioned at the beginning of this chapter very often teachers and staff used the term recycling to refer to reusing or upcycling. Despite this confusion, teachers seemed to be very proud of the way they reused material. For instance, for Jasmín reusing materials appeared to be a distinctive and important practice at the preschool: "Here, what we do have, is that we are avid recyclers" she commented during the interview. The way she referred to herself and her colleagues as being recyclers suggests it is something she identifies with and feels proud of. Reusing materials appears as a characteristic that makes them different from other preschool settings.

Jasmín and Sabina explained that since reusing is not very usual at other preschools it was seen as a controversial topic for other teachers who work at public preschools. Both Jasmin and Sabina talked about the discussion that took place at one of the teachers' councils that are organised with teachers from other preschools:

> When they [teachers from public preschools] came here to see the City Preschool they were very surprised because they realised that we work with recycled material and that we can still gain children's attention and interest with it. But they attacked us in that sense, they said, "You're a private school, you're three teachers and with air-conditioning and we're there with many children and just a fan." They went around the

classrooms and they were surprised, first because we have fewer children that they do and then because we have air conditioning in the classrooms.

Similarly, Sabina said:

Traditional schools, government schools, they use a lot of materials that are not so, how to call it? Mmm…biodegradable. And when they ask us about that, well, we got into a debate and controversy about it, because they shouldn't [use that type of materials]. Obviously, we defend what we do because it's in benefit for many things and for the environment and so we say, well, instead of using foamy [a flexible material made of plastic], we use cardboard…what they throw away, we reuse it.

These extracts from the interviews show that simply by using different materials from those commonly employed at some public preschools, the City Preschool was already challenging traditional practices. In that sense, this also allows us to see that reusing not only is uncommon at other preschools, but it is seen as a practice exclusive of certain types of preschools and seen almost as a privilege. Particularly, Jasmin's account brings to the surface aspects of reusing and taking care of the environment in relation to contrasting conditions between public and private education.

The teachers and staff also attributed their commitment to reusing and recycling to the principles of the Reggio Emilia approach. Moreover, they referred to reusing as a practice that is meaningful for them even outside the preschool, for instance Sabina said:

It [Reggio Emilia] is based on a model where recycling or reusing of materials and all of that becomes part of you. Sometimes I get home and say, "I'm not going to chuck this because I can use it [again]." And then is like you realise that, "Hey, I didn't use to do this, when did this happen?"

To this regard Felicia explained more about the links between the pedagogical approach and reusing and the role she plays as a resident artist:

The Reggio Emilia philosophy itself encourages the re-use of materials…I give ideas to the teachers, or they come to me with some ideas…I invite the teachers to 'make' things and suggest them not to buy new material but instead try to look for ways in which we can reuse and, for example, re-use containers so that these can be used in the classroom, for the children.

Different from the rest of the staff that I interviewed at the City Preschool, Felicia did make a difference between reusing and recycling and pointed out the practical and structural obstacles they face at the preschool, being storage and space one of the main issues, as she explained during the interview:

> When I arrived in the setting the arts classroom was already full of different materials…Before, the list of supplies [that parents are supposed to bring or buy each year] used to include those materials [reused or second-hand materials]…However, the handling of such materials was complex…now it's me who asks parents to bring materials based on what I know we will need. It that way we managed to store the material here. Right now, from all the things that have been used to decorate, nothing has left the preschool [meaning it has not been thrown away] … We are searching for ways to complete the cycle; that the rubbish goes to a collection centre to be recycled, because it makes no sense that the material arrives here and later then gets all mixed.

Felicia also elaborated on the challenges of recycling in relation the services available and how this affects them at the preschool:

> In other places of the world, there are collection centres where companies can leave their materials. We don't have that system yet...Becoming a recycling centre is complex. We had the idea of placing different bins so everyone could throw things there and teach them to separate waste and all that, but when discussing this with the principal we had to put our feet on the ground, we said: -what would we do with all that right now? There's nothing we can do. So, what do we really do now? At this point, we simply reutilise and only three types of materials, that's it.

Felicia's explanations highlight how despite the interest of teachers and parents in reusing and recycling these two practices are limited by practical aspects some related directly with the preschool facilities and functioning and other with external factors such as waste collection and recycling services offered in the city. This then shows that the fact that they haven't embarked in the next step of recycling is not because of lack of interest but rather by the complexities and challenges posed at the macro level.

Another important thing to notice is that in practice children were not directly involved in reduce, reuse, and recycle practices. Children were mostly the second-consumers or users of the reused materials or spectators of the upcycling displays. There were also some inconsistencies and contradictions in how reduce and reuse were

implemented during botany, such as the use of disposable cups during the bean-growing activity. Outside the club, for instance during teachers' lunch breaks, using disposable plates was a common practice.

5.1. Chapter Summary

At the City Preschool, most of the interpretations and practices align with the education about the environment approach. Differently, at the Waldorf Preschool, the predominant approach was that of education in the environment. In summary, neither of the preschools showed a more critical approach of EE.

At the City Preschool the environment is mainly understood as the place where one lives while at the Waldorf preschool the dominant view is to see the environment as a philosophical and spiritual space. Regarding understandings and practices of EE, at the City Preschool EE is understood as taking care of the place where one lives and encompasses aspects such as learning to make good use of local resources and learning about environmental problems, most of these activities occurred as part of the botany club. Reusing is also a common practice that teachers identified with and felt good about.

At the Waldorf preschool the interpretation of EE is based on the idea of living in harmony with the environment, deploying a more aesthetical and spiritual approach which reflects the idea of the environment as a philosophical space. This view appears to be strongly linked with Steiner's anthroposophical principles. Practices associated with EE are embedded in everyday routines and included outdoor play, visits to a nearby farm, walks to pick up rubbish, separating food waste for the compost. The characteristics of the place and the architecture of the school are also seen as relevant aspects for the idea of living in harmony with the environment.

Despite the differences, what these two interpretations had in common was an emphasis on care, individual actions and conservation. The following table summarises the findings of sub-questions one and two.

Sub-question one: How is EE tackled in two Mexican preschools with contrasting pedagogical models?		
Sub-question two: How do teachers understand the terms 'environment', 'EE' and 'sustainability'		

	Ambit	Case 1: The Waldorf preschool	Case 2: The City Preschool
How is EE tackled:		EE as a lifestyle	EE as a curricular activity
Understanding of key terms	**View of the environment:**	As philosophical and spiritual space	• As the place where we live which is both natural and human-made • As a problematic place
	View of EE (aim):	To live in harmony with the environment	To take care of the place where we live
	View of sustainability:	Same as EE	Unfamiliar and unknown term
EE in practice	**Emphasis on:**	Having aesthetic experiences, bonding with nature, interacting with natural elements and other living beings	Learning about the natural environment and how to take care of it and protect it
	Underlying teaching-learning paradigm:	Experiential learning and learning by good example	Constructivism, cognitive and experiential learning
	Common teaching and learning strategies:	Play outdoors, visits to a farm, picking up rubbish walks	Lecturing, handouts, drawings, children's presentations, experiments, sowing, planting a garden and looking after it
	Other relevant aspects:	Place, architecture and design	Reusing and upcycling
Dominant EE approach:		Education in the environment	Education about the environment

6. Children Navigating EE

This chapter is about how preschool children construct, make sense of, navigate, or enact particular discourses around the environment, taking care of the environment and environmental problems and it responds to the third sub-question of this research. The aim is to further understand how children form their own ideas around these topics and shed light on what influences their views, what matters to them and why. It is important to highlight that, as mentioned previously, I was not allowed to interview children at the Waldorf Preschool, therefore, the information presented here corresponds only to the children at the City Preschool who were part of the botany club.

This chapter contains three main sections. The first is an exploration of children's accounts and actions around the notion of the environment; in the second section I explore further the notion of taking care of the environment and look at the elements that children use to construct such views, as well as how they make sense of, experience, and practice taking care of the environment. The third section is about how children understand certain environmental problems, specifically littering and pollution, and what influences their views.

6.1. Children Navigating Ideas Regarding the Environment

Overall, children at the City Preschool did not elaborate much on the term environment. When I mentioned or asked about it either during the interview or when we were having informal conversations, the most common answer was that they had not heard of it or did not know what it meant. In general, the children who were familiar with the term related it to nature, particularly plants and animals and expressed feelings of joy, happiness, and love. However, one child also associated the environment with plants and animals that were in danger of harm or death. Likewise, the narrative of care and protection was very common.

Since it was evident that the term environment was unfamiliar to most children, I tried to be attentive to other alternative ways of referring to it. Some of the terms that are often related to the word environment are nature, mother nature or mother earth. Therefore, references to these terms have also been included as complementary

ways to explore how children navigate ideas regarding the environment. The following map summarises children's ideas regarding the environment and how these connect with each other.
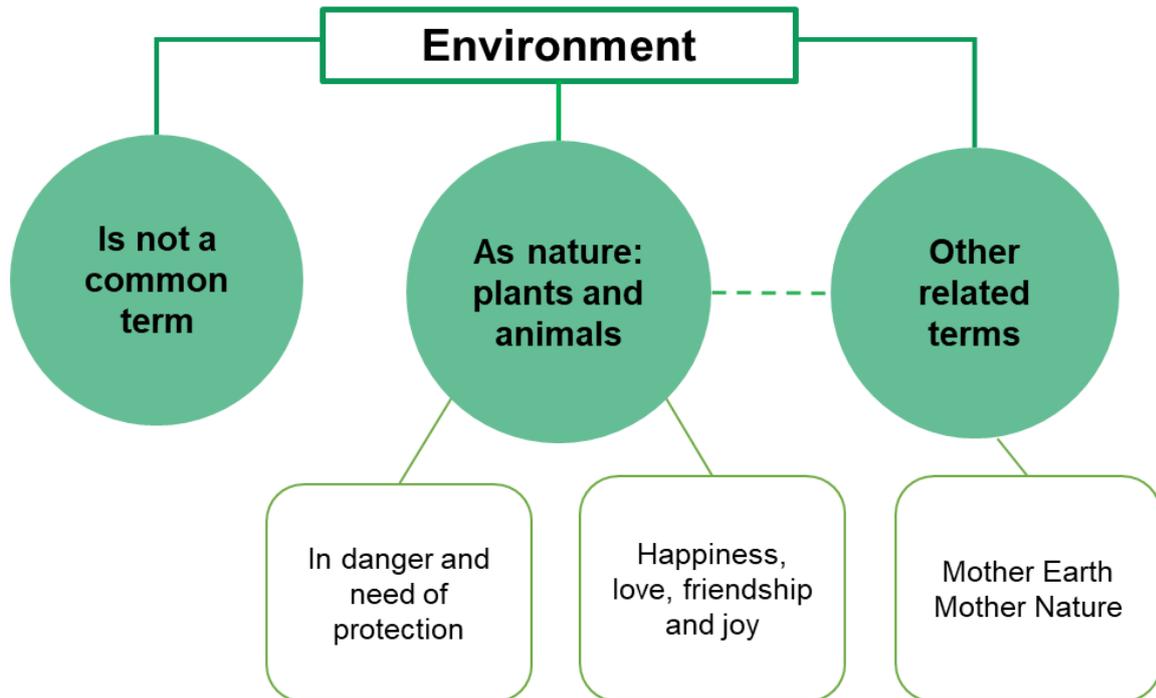
Figure 14. Children ideas regarding the environment

An example of children who responded that they had heard the word environment and associated it with natural elements are David and Faby from the Sailors group. During one of the activities of the botany club, they made the following drawings (see Figures 15 and 16)

Figure 15. David's drawing

Figure 16. Faby's drawing

Although they did not elaborate more, the two drawings have some natural elements such as trees, flowers, clouds and the sun and both contain hearts, which suggest an association of natural elements with feeling or emotions. In addition, David's drawing, has other elements from the built environment such as a house and it also shows a sign that reads "do not pull" which might be connected to what they have been learning at the botany club regarding protecting the plants, which at the same time links the situation of children pulling or breaking the plants at the playground.

6.1.1. Environment in Danger

Only Mónica and Claudia from the Sailors group used the word environment and elaborated on the term. They both associated the environment with plants and animals, yet Mónica made special emphasis on plants and linked the environment with love but also with the idea of death and danger, as can be seen in the following extract from the interview:

> **Mónica:** Here I see a toucan, and there is the environment, there are some dolphins.
> **Adriana:** So, what is the environment?
> **Mónica:** The environment is the plants.
> **Adriana:** And what do you think about this picture?
>
> **Mónica:** It looks like love; it seems that there are many plants, as if someone had died, and, here, there are little flowers with dolphins going around checking that it doesn't get destroyed and a toucan to sound the alarm.

Interestingly, Mónica deploys a contrasting view of the environment. On the one hand, she associates it with feelings like love, while on the other, she links the environment with death and a problematic or dangerous situation in which animals act as protectors. This narrative thus reproduces the discourse of the environment as a place that has been damaged, is in danger and needs protection, which echoes teachers understanding of the environment as a problematic place.

6.1.2. Exploring Alternative Terms: Mother Nature/Mother Earth

Paula, one of the girls from the Discoverers group, unexpectedly brought up the term mother earth during the interview, and interestingly, she linked it with feelings of happiness and gratitude. The following extract from my fieldnotes explains this in more detail:

> I was showing Paula the picture of the straws. After asking the children what they saw in the picture, they agreed that those were straws, and someone was holding them. They also mentioned many things related to arts and crafts that could be done with straws and how straws were useful for other activities, such as drinking. They talked about places or situations where they had seen or used straws. After a short pause, I asked the children: How does this picture make you feel? And Paula said, "Happy and grateful because of Tefiti, she is the mother earth" and after asking her what that meat, she explained: Tefiti was in Moana's movie, and she was the mother earth that speaks but in silence".
>
> (Field notes)

To keep exploring different notions about the environment and inspired by Paula's conversation, in the interviews I conducted afterwards, I asked children if they had ever heard the word Mother Earth, or something related to it. Only Mónica, Valentina, and Enrique said they had, and they associated it with nature and pleasant feelings too, as can be seen here:

> Is the plants; everything that one takes care of, the animals…is all nature. Like love, like friendship, but what we have to take care of the most are plants.
>
> (Mónica)

And Valentina said:

186

> I have heard that name, but it's more like Mother Nature [rather than mother earth], it's called like that. Is like… I can't remember, but I think it's the name of a flower that smells nice.

Like Valentina, Enrique seemed to be more familiar with the term mother nature rather than mother earth, but like Valentina, he did not elaborate much. He simply commented:

I have heard about mother nature... I think she lives in the woods and animals are there, and I don't know more than that.

In these interpretations of mother nature, it is possible to see the reference to flora and fauna again and an understanding of mother nature as someone or something they like.

Although most of the children had not incorporated the notion of environment entirely into their vocabulary, their accounts indicate a tendency to associate the environment with nature and particularly with living beings such as plants and animals. The account of the environment also evoked activities or situations that children like. Children also indicated an emotional aspect of the term nature by linking it with happiness, love, gratitude, and friendship. Such discourse stresses the relevance of the affective dimension of EE, which bears a resemblance to the discourse of forming a bond with nature, often associated with the education in the environment approach.

6.2. Taking Care of other Living Beings

My findings show that among children, there was a common narrative around the idea of taking care of other living beings, which was expressed during the interviews, informal conversations and events that occurred either during the botany club lessons or recess. This overarching theme can be linked to how children navigate or experience EE at the preschool because it connects with the understanding of the environment as nature and the emphasis given to plants and animals, as well as with the narratives of care and protection. Likewise, the findings show that there are

similitudes between the idea of caring for other living beings and the notion of taking care of the place where we live which was presented earlier.

Within the notion of caring for other living beings, I identified four key messages or moments, which I have organised into four subsections that are nevertheless interconnected and should therefore be seen as an unfolding narrative or a learning journey rather than separated findings. Each of these findings is linked at the same time to aspects that seem to have contributed to or prompted the given understanding or event. Figure 17 summarises these findings.

Taking care of other living beings

Environmental knowledge

1) Learning about plants: they are alive and can die

2) Valuing other living beings: they can feel too

Empathy and sense of connection

Social, normative aspect

3) Adhering to the norms: do not harm the plants!

4) A cause to stand for: protecting the plants

Proactivity
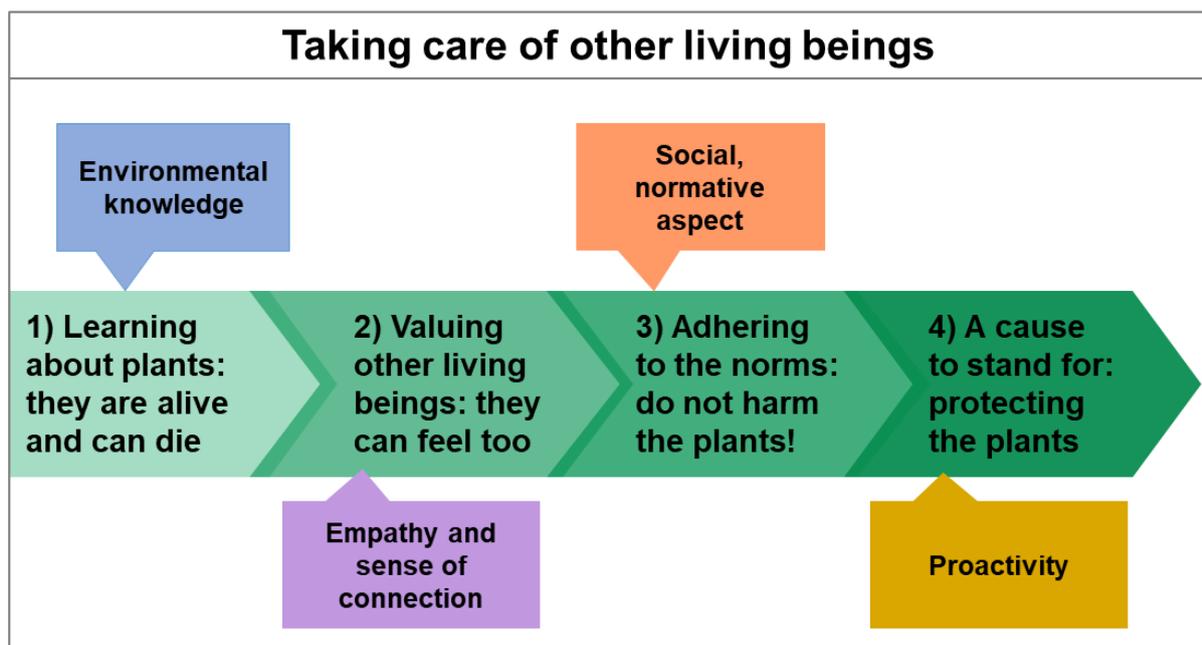
Figure 17. Children's findings regarding taking care of other living beings.

The discourse of taking care of other living beings evolves from the discovery that there are other living beings coexisting with u s. This is then complemented with the realisation that plants, since they are alive, can also die, which relates to gaining knowledge about plants. This insight then serves to support the idea that other living beings should be valued, cared for, and protected as they share common characteristics with humans, a narrative that relates to building a sense of empathy and connection with other living beings. This chain of events and realisations around the idea of caring for and protecting other living beings appear later as statements that are supported by the expectations and norms that emerged from the botany club and that were seconded by the teachers. Finally, for some children, the message of

protecting the plants became a real concern and thus a cause to stand for. This then resulted in a more proactive position that has the potential to move towards action. The following diagram summarises the findings, which I explain in more detail next.

6.2.1. Learning about Plants: They are Alive and Can Die (Environmental Knowledge)

The way children talked about the characteristics of plants and animals, mainly by granting them the status of living beings, appeared to help them find commonalities between human beings and plants and animals that prompted particular narratives around care and responsibility for others. Living beings, or being alive from the children's perspective, were related to aspects of life and death, which also onnected with narratives of protection, harm and social values. During my time attending the botany club, children demonstrated outstanding knowledge about plants, particularly about how they grow and develop. Many children showed awareness of plants as living beings. Some children expressed this through their drawings. For instance, during one of the botany lessons, the teacher asked the children to draw something about what they had been doing or experiencing at the botany club. Memo, who was one of the youngest children in the Discoverers group, made a drawing that showed seeds, roots and leaves. He seemed to be very engaged in the activity, and while drawing, he said: "Living plants, these are lots of living plants" and he kept repeating this all over again (see Figure 18).
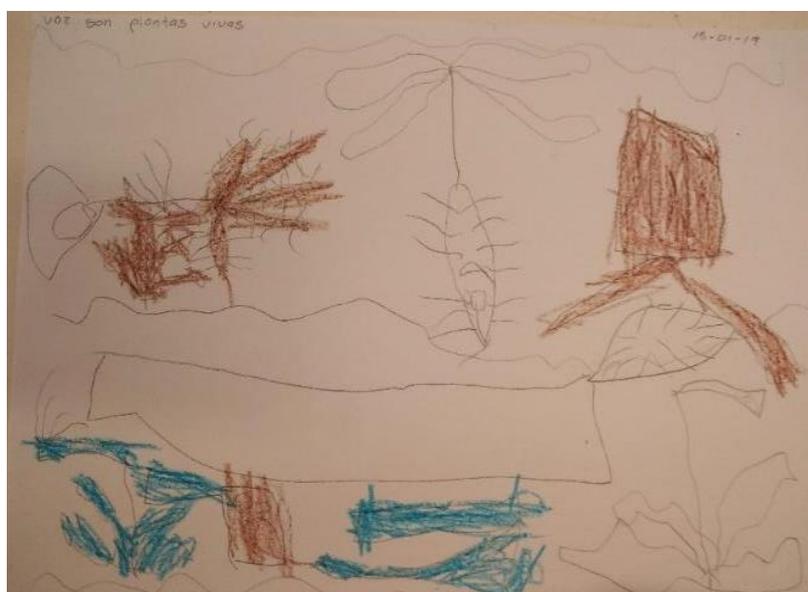
Figure 18. Memo's drawing: these are living plants

The emphasis he made suggests that he was amused by the idea of plants being alive and he really wanted to let others know too. Something to consider is that this happened a few days after the children had planted a seed in a cup and the teacher had explained to them the cycle of life of a plant using a simple diagram to show children how a plant is born, grows and dies.

Another topic that appeared to be very significant for children was death. This seemed to be a crucial aspect for them to be able to realise that plants are living beings, as can be seen in the following extracts from the interviews:

> **Adriana**: Are plants living beings?
> **Nora**: Yes
> **Jesús:** Yes
> **Adriana:** Why?
> **Nora:** Because they grow when they are alive, then, they die.

Similarly, Isac said:

> Plants can grow, like seeds…and plants…if they grow, then they will die. They...live and then people plant another, and they plant everything and then the plants die.

Lalo also spoke about the possibility of plants dying:

> **Lalo:** If you tear them [the plants] they die. You must cut them carefully, so they don't die, and they can live even after days have passed, and once they get old they have to die".
> **Adriana:** Do you think plants are important?
> **Lalo:** Yes, because they could die… we must water them, so they don't die

Likewise, Faby gave a very similar answer to this question: "They can die. If you never water the flowers they are going to die!"

The mention of plant characteristics such as growth and death indicate that children are aware that plants are living organisms. These examples suggest that children use the concept of life and death to emphasise the value of plants and animals. Likewise, the way children talk about death suggest that they associate it with the concept of a lifecycle and the understanding that everything that is alive will

ultimately die. These examples imply that children appreciate life and are concerned with its preservation.

6.2.2. Valuing other Living Beings: They can Feel too (Empathy and Sense of Connection)

Some children referred explicitly to the need to take care of animals or plants "because they are living beings" (Claudia). Their accounts imply that being alive or existing is the main reason for taking care of other species. Such a rationale is compatible with the notion of the intrinsic value of nature, in which nature is seen as an end in its own right as opposed to a means for other things. While talking about this, children also stressed the parallels between humans and other living beings to establish a common ground. An example of this type of rationale was Valentina. She was one of the girls who, since the start of my visits, has called my attention for her enthusiasm to participate, express her opinions and be heard. During the interview, she was very talkative and keen to show what she knew or had learned. One of the most significant lessons for her was that plants and trees are living beings and therefore deserve special consideration.

> **Adriana:** What do you mean when you say that plants are living beings?
> **Valentina:** I mean that they can sense too, and it hurts them if you tear them off. Is like, for instance, the branch is its body, its head is the centre, and its hair are the petals, and it hurts it if you tear them (the petals). Because it's like if... it really hurts us when someone pulls our hair out, doesn't it?

Moreover, Valentina disapproved of those who cut trees and criticised the lack of awareness regarding the fact that plants and trees are living beings. She talked about this after discussing the idea of cutting down trees to build houses:

> **Valentina:** Yes, poor things—the living beings, the ones who died—but the ones who cut them are mean.
> **Adriana:** Mean?
> **Valentina:** Well, not exactly, but they are a bit selfish. They think more about houses than about other things, which are indeed living beings, and houses are not living things.
> **Adriana:** You think they are selfish?

> **Valentina:** Yes, a bit selfish, because houses are not living things and trees are. They [people who cut trees] don't think about other living beings.

Claudia also elucidated something similar when talking about animals:

> **Adriana**: And what does that [living beings] mean?
> **Claudia:** That we have to take care of them.
> **Adriana:** Because they are living beings?
> **Claudia:** We are too.
> **Adriana:** How do you know that?
> **Claudia:** Because we have bones, and we are sensitive.
> **Adriana:** What do you mean?
> **Claudia:** That they can hurt our bones.

These accounts demonstrate some ways in which children make sense of the importance of other living beings and start to construct a sense of care and protection by using what they know about plants, animals and human anatomy. Moreover, they show how children begin to assume responsibility and form ideas about what should or should not be done.

The way Claudia used the expression "we have to take care" deploys a sense of ought and responsibility towards other living beings, rooted in the fact that humans and plants have characteristics in common. In this way, being alive relates to being able to feel pain, which is something that human beings also experience. This then appears as the point of reference to get in 'the other's shoes' and create awareness of the others' existence, their vulnerability, their needs and ways of preventing harm, which is the basis of empathy.

Mónica also referred to the idea that plants can sense, yet for her, this meant not only that plants could feel pain but also that they have feelings. She mentioned the following during the interview after talking about rubbish on the beach and the streets:

> **Mónica**: Plants are very sad.
> **Adriana**: Do you think they feel?
> **Mónica**: They are feeling a lot of pain…Imagine that I am the rubbish (stands up and brings some sticks and papers she found on the playground) and this is the plant, and that I'm on top of it. How would you feel If I were pushing you?

In Mónica's case, she employed the narrative of plants feeling pain to justify and explain why we should not litter. Her view was that rubbish is harmful for the environment because it could physically harm or even kill plants when it is thrown on them.

The manner in which Mónica and Valentina conveyed their message indicates that they were attempting to persuade or teach me (and their peers) not to harm plants or animals. It is remarkable how they used a basic explanation and their knowledge and assumptions about plants to construct an argument for the protection of the environment.

Javier and Enrique showed a similar narrative. They elaborated on this during the interview after talking about cutting down trees:

> **Javier**: The trees when they cut them, they…
> **Enrique**: …Die
> **Javier**: They feel sad…because it hurts them
> **Enrique**: And they cry, like when we get hurt
> **Javier**: Like when someone pulls our hair
> **Enrique**: we say: "Ouch!" And if someone pulls a leaf from a tree, they say the same … but is not possible to hear that.
> **Adriana**: What do you mean? Do they speak then but we can´t hear that?
> **Enrique**: No, they don't speak is just an expression, what I just said.
> **Javier**: …because they also feel what we feel…they feel what we say. When someone pushes us, we can feel it in our heart…but plants do not have hearts, they only have roots.

This conversation shows how Enrique and Javier incorporate ideas about life and death, personal experiences, beliefs, animism and creativity to construct arguments for environmental protection and conservation. The way they clarify that trees do not really speak or have hearts is an example of how they employ metaphorical language to make sense and justify their argument against cutting down trees. In this sense, rather than seeing this as a lack of understanding or limited knowledge, it shows their ability to adapt and combine information from different sources to create their own discourse. Enrique and Javier's accounts show that they are aware that trees do not have exactly the same characteristics as people but presenting them in such a way provides a frame of reference that gives space for the expression of feelings and makes their message more meaningful and easier to explain.

These messages were embedded in narratives oriented towards stopping or avoiding harm to preserve life, which were closely linked to the belief that other living things, like us, can feel too. These accounts suggest that children's beliefs and understandings have a moral dimension based on the intrinsic value of nature and a duty of care. They also show the capacities of children to connect knowledge, imagination, and emotions into a discourse of environmental care. In this instance, care is associated with the notion of protection and looking after those beings that are more vulnerable and fragile, which also reveals an ethical reasoning, often disregarded in young children.

6.2.3. Adhering to the Norms: Do not Harm the Plants! (Normative Discourses about Environmental Care)

Children's ideas about conservation and care seemed to be influenced by the activities held at the botany club, where not tearing plants and maintaining the garden in good condition were two of the most popular messages and practices promoted by the teachers. Explicit messages about not tearing plants or avoiding damaging them were common at the preschool, as the garden that the children had built had been damaged, resulting in dead plants or seeds that were unable to grow.

During one of my visits, I documented when teacher Sabina showed the children some images of signs containing phrases such as 'please do not harm the plants' or 'respect plants. Inspired by this, children said they would like to do something similar. Some children were in the process of learning to read and write, yet they were very keen to communicate their message, and they asked me if I could help them with this. I accepted, asked what they wanted to say, and proceeded to write the messages on a piece of paper for them to copy. The children then made drawings with signs written by themselves, which were later placed in the garden with the help of the teacher. (Figure 19 and Figure 20).

Figure 19. Do not damage the plants
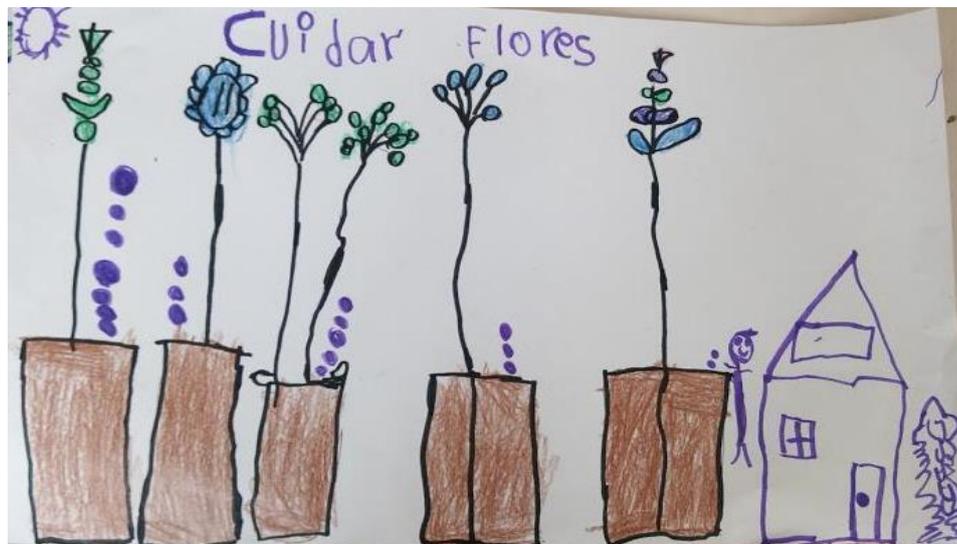
Figure 20. Take care of the flowers.

These events in the garden, together with the messages deployed by teachers, became fundamental for some children. Soon, not cutting or damaging the plants circulated as a normative message that the children from the botany club incorporated into their narratives and everyday practices.

For some children, not ripping or damaging was seen as a moral fable that they had learned from the botany club. For instance, Lalo, during the interview, after his friend Juan said he had cut a beautiful flower to give it to his mom, said:

Lalo: But you must not cut, because that is bad manners.
Adriana: Really? Tell me more about that.
Juan: When children play on the tyres, they jump and pull a leaf from the tree, and that's why they die.

Lalo: Sometimes, when I wasn't in the club, I used to do that, and when I chose botany, at first, I thought it wasn't about plants, and I did it again [cutting the plants]. But now I see that it is about plants, and I don't do it anymore.

These messages of not ripping the plants initially transmitted by teachers seemed to have acted as a normative or regulatory discourse that served to direct children's behaviour and duty of care. It is interesting to note the use of the phrase 'I chose botany' in Lalo's account, which echoes the idea that children like him are free to make a choice at the preschool. Furthermore, he evidences a moment of reflection and argumentation when he talks about what he used to do before joining the club and why he does not do it anymore.

In the example provided, Lalo framed the idea of not cutting plants as a social norm that he then reflected on, and eventually, this idea not only changed his understanding of what the botany club really was, but it also acted as a means to modify his own behaviour and personal choice by trying to self-regulate his desire to cut the plants. In that sense, taking care of plants became both a social and a moral norm that, through discourses of taking care of living beings, acted as messages of stewardship and protection that seemed to operate at the level of the self through the idea of choice and adaptation.

6.2.4. A Cause to Stand for: Protecting the Plants (Proactivity)

For some children, protecting the plants was more than following a rule or good manners, it became a cause to stand for. Mónica, for instance, not only showed interest in plants, but during my time at the preschool, she stood out for her enthusiasm and knowledge about plants. She also seemed to be emotionally invested in plants, so seeing them damaged or ripped represented a real and serious concern for her. The following extract from field notes illustrates the situation:

One day, after being outside in the garden, Mónica came back to the classroom, seemingly worried and sad because some children had destroyed a cilantro sprout that had been planted a few days ago. I could tell by the tone of her voice and her breathing that she was upset, and she really wanted to express this.

That day, the botany club teacher had been called for a staff meeting, and one of the assistant teachers was left in charge of the group. The assistant teacher invited the children to use Legos to represent what they would like their vegetable garden to be like. Mónica took the Legos and came up with the idea that to protect the plants, they could buy a little fence; she used the Legos to construct a model of the fence (Figure 21):

Figure 21. Mónica's model of a fence to protect the plants

Monica's creative model was triggered by the concern of plants being damaged and it is an example of how she used her imagination and abilities to create something that could be actually constructed and become a solution for the problem she is worried about. It also shows how she started to embrace the normative messages of not harming the plants and turn them into initial plans for action aimed at protecting them.

The message of protecting the plants also began to entitle children to act as active plant stewards outside the classroom or the botany club itself. An example of this was Paula:

It is recess time, and the children are playing in the outdoor playground. There are many children running and laughing. Two girls who do not belong to the botany club start playing with some rocks and throwing them at the plant pots that the children from the club had arranged a few days earlier. Paula, who is nearby with a friend, notices that and approaches the two girls and says, "Hey, what are you doing to my plants?" "Do not throw rocks at them." Paula's friend supports her and says something similar to the two other girls. By the look in their eyes and their facial expression, I sense it is a moment of tension, and they seem to be angry. Then Paula stands in front of them and firmly insists, "Do not throw rocks!" A few seconds later, the two girls who were throwing rocks left.

An important aspect of these examples is that they were mainly inspired by the teachers but initiated by the children and they also involved collaborative work between peers or between children and adults, which suggests some level of agency, at least within peer dynamics inside the preschool. What was missing, however, was the time to reflect and give continuity to these actions at a deeper level. Very often, teachers had to rush children to finish their activities as they had to move on to the next one, moreover, children's activities during the botany club tended to be interrupted by staff meetings.

Despite the limited opportunities to reflect and give continuity to children's work and ideas during the botany club, the examples presented in this section show that these children already have ideas and can produce explanations about what taking care of other living beings is. These ideas seem to be influenced by the content and the activities of the botany club, and particularly by the messages about protecting the plants produced by the teachers.

Other examples of how children take a stand and position themselves as stewards of the environment include contradicting or challenging other people's behaviours, including those of their family or primary carers. For instance, during the interview, Mónica told the following anecdote:

> My aunt does thank plants for their generosity, and she gives them fruit peel. But my mom sometimes throws bottles and glasses, like disposable ones... She could as well go and say sorry to the plants and remove the rubbish.

This shows how Mónica is positioning herself against these actions, by raising her voice and taking a stand. It also elucidates her ability to form her own opinion and remain keen to promote environmental care despite adults doing otherwise.

Another example of children taking a stand was Valentina. She spoke about this during the interview when other children started talking about taking care of the plants by keeping the space clean.

> **Valentina:** Sometimes I ask my dad, "Can we pick up the rubbish?" and he says, "No, no! C'mon! Let's go!" But, well, he does say we shouldn't litter, but... I do not agree with him that much because I do want to help. I

don't agree with his decision that much. Not so much... It's just that you must clean the plants because they get polluted.

Adriana: What is it that you disagree with, then?

Valentina: In that we don't help that much and that I can't clear up the rubbish

Adriana: And have you told your dad that?

Valentina: No, because sometimes when I am naughty, he hits me a little bit and tells me I must obey. because if not, well, I don't like when he hits me, which is why I haven't told him.

This extract from the interview shows how even when Valentina's dad instils in her not to litter, he also stops her from randomly picking up rubbish, possibly because he thinks it might not be safe to do it, because they do not have a place to put the rubbish or because it interferes with his dad's normal routine. In any case, coercive mechanisms of control are employed to inhibit Valentina's conduct.

Notwithstanding, Valentina's expressions show she is capable of confidently communicating her ideas and forming her own stand regarding littering and what should be done about it, even when this contradicts her dad. Moreover, her firm tone deployed self-confidence and some of the words she employed, such as 'agree', 'disagree and 'decision, demonstrate that she is used to discussing her ideas with others. However, despite the confidence and abilities she exhibited, she has refrained from sharing her ideas with her dad because she is scared that he might hurt her.

These accounts allow us to see how Valentina has agency and can express it in diverse ways when she is given the opportunity to do so. Yet, this passage also reveals how this same agency is restricted by disciplinary measures enforced by parents. Obedience and fear are at the centre of this narrative and act as mechanisms to control and restrict children's actions.

Having presented the findings around how children navigate ideas regarding the environment and EE, in the following section I explore how children make sense of environmental problems, what they know, and how they experience them.

6.3. Children Navigating Environmental Problems: Plastics, Littering and Pollution

Regarding environmental problems I found that one of the most common concerns among children was rubbish and littering. Children spoke about seeing rubbish in public spaces like the street, the beach or the jungle and expressed feelings of sadness, anger and disapproval. Children also spoke about why they think littering happens and some of them shared ideas and hopes about how to solve this problem.

The two overarching themes I identified were plastic in the oceans and ideas around water and land pollution. Protecting and taking care of living beings was once again a common discourse when talking about environmental problems. Yet, the emphasis was on the consequences of not caring or protecting, therefore, rubbish was seen as a problem because it could harm or kill other living beings. A relevant aspect of exploring ideas around environmental problems is that these evoke many references to the media and family practices. The following diagram show the two key themes:
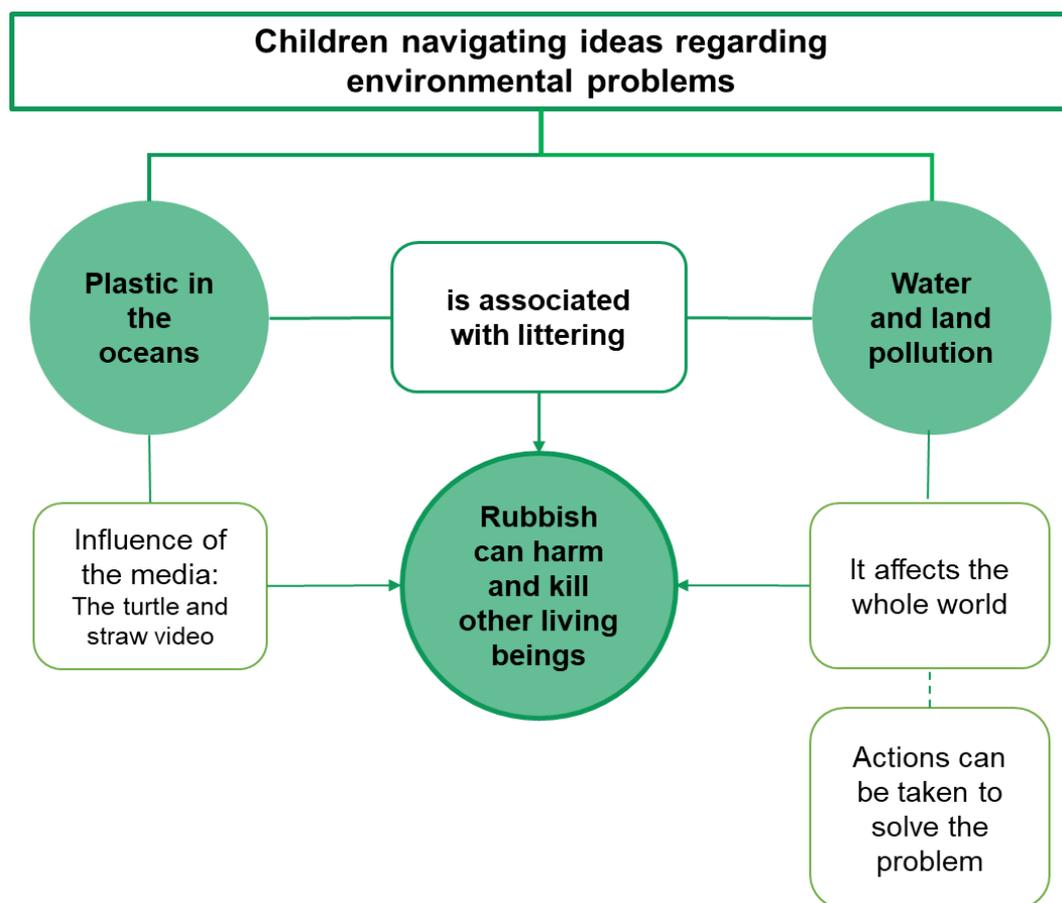
Figure 22. Map of children's ideas regarding environmental problems

6.3.1. Plastics in The Oceans

The accounts about rubbish on the beach were related to the broader topic of plastic pollution. Most children who spoke about this referred to an image or a video of a turtle that had been injured with a straw. The turtle and the straw are a very common and influential image for children, as they appeared several times within their conversations and became a central topic for them. For instance, here:

> **Valentina**: I and my dad watched a video about a baby turtle and a mom turtle. They had a straw in their nose and then some people helped them. They made a little bed for the turtle to lay down and then they took the straw out of its nose, but it was bleeding. It couldn't breathe with the straw.
> **Adriana**: And what do you think of this?
> **Valentina**: For me, it is serious, because poor animals! They are living beings to.

Valentina's account highlights watching videos as one of the activities she practices at home and that seems to impact her views and concern about the environment. Watching videos seemed to be a common practice for other children too, as expressed by Sara:

> **Sara**: People don't know where to find a rubbish bin on the beach, so they throw it.
> **Adriana**: And what do you think of that?
> **Sara**: It is wrong. Because, at home, I watched a video about a turtle that had a straw in its nose.
> **Adriana**: Really?
> **Sara**: The last bit of straw got stuck in its nose. That is why you shouldn't litter, because they choke.

These extracts from the interviews show the influence of home or family practices together with the input of very popular videos and pictures circulating around social media. What children recalled seeing most likely refers to a video published in 2015 by marine biologist Christine Figgener, entitled Sea Turtle with Straw Up its Nostril – No to Plastic Straws. This video was filmed in Costa Rica when she and her team were conducting routine research on turtles. The video has now had more than 38 million views on YouTube and has been widely shared on social media.

Another message that was common among this group of children was that turtles or fish eat plastic because they confuse it with food, and this could kill them, which is

again a message that permeated social media and news about the environment. Claudia and Gael, for instance, offered explanations about how they think plastics affect marine species:

> **Claudia**: Turtles sink with plastic bags…with straws too because they can eat them.
>
> **Gerardo**: And there are little pieces and I think they can't eat those very well…they chew them, but they can't, and they swallow it, but if they do, when their belly is full it starts hurting them, turtles then die.
>
> **Adriana:** How do you feel about that?
>
> **Claudia** & **Gerardo**: Sad
>
> **Claudia**: Because they are living beings

Similarly, Vivian from the Discoverers group said:

> **Vivian:** I do not use straws because animals can die. That's what my mom told me
>
> **Adriana:** Really? Tell us more about this
>
> **Vivian:** if you throw them in the sea some animals could swallow it and die…

Nora and Jesús also mentioned this during the interview:

> **Adriana**: what do you see there?
>
> **Nora**: a lot of rubbish
>
> **Jesús**: in the sea
>
> **Adriana:** What do you think of that rubbish on the beach?
>
> **Nora**: fish can eat it and turtles too and they will die
>
> **Adriana**: And how do you feel about that?
>
> **Jesús**: sad

Children's references to these videos and the image of the turtle and the straw evidence the power that social media messages have on children's perceptions of environmental problems.

Some children (Mónica, Valentina, Ana and Javier) not only showed knowledge, interest and concern for the environment but also stood out for their willingness to take care of it. For instance, in the interview with Rita and Valentina, they spoke about possible solutions:

> **Valentina**: When I grow up I want to create a cleaning equipment that cleans up all the beaches.
> **Adriana**: When you grow up? Do you think you could do something like that now?
> **Valentina**: I don't know because obviously I can't pay for the cleaning equipment, so I don't know. I don't think so.
> **Rita**: And what about when your parents take you to the beach?
> **Valentina**: Well, in that case, one can start cleaning up
> **Adriana:** Yes, that might be an option. Have you ever done that?
> **Valentina**: I haven't done that, but I am thinking about it.
> **Rita**: I haven't either because my parents don't allow me to go far away from them. Because in my house I have a pool and that's why they don't really take me to the beach, because I have a big pool.

The conversation between Rita and Valentina shows that they are interested in finding a solution to the problem of plastic in the oceans, yet there are circumstances that hinder their possibilities to do so, and they are aware of that. For Valentina, the main limitation is the financial aspect, while for Rita, the constraint comes from the risk that being on the beach might have for her. Rita's accounts imply that her parents are worried that something bad could happen to her if she is away from them in a public space, which suggests a perception of public spaces, such as the beach, as dangerous for children.

Plastic in the oceans is also a global concern that is closely related to pollution and the deterioration of both marine and land ecosystems. Children also spoke about this during the interview, and this is the topic that I address in the following section.

6.3.2. Some Ideas Around Pollution and Littering

In this section, I address specifically how children used and made sense of the term pollution. Pollution was not a very common word among the children who participated in my study. Yet, some mentioned it during the interviews, revealing the diverse ways in which they interpret it and how they manage to connect conceptual knowledge with local and personal experiences from home and school. Children's discourses around pollution also involved ideas around plastics, rubbish and death.

Pollution and waste management were themes or projects that some of the City Preschool children had been addressing in their class in addition to the botany club. In one of the classes, the teacher had asked the children to start a rubbish challenge

at home. This challenge consisted mainly of cleaning a space that used to be dirty and taking pictures before and after. Sara, one of the girls who took part in this challenge, connected this activity with the idea of pollution and how she believes this affects animal welfare:

> I was at home learning that polluting is not a good idea because animals eat it [rubbish], they make a mistake and don't see that it is not food, is rubbish…but it looks like their food.

Sara was also very keen about telling me a story of a bunny she had, which she explicitly linked to the topic of plastics and death:

> I'm going to finish my story of the bunnies…My bunny died with a little plastic, with a little rock, something like that; and in the morning, I saw how it was still, as a statue, so I opened the cage and move it around and it wouldn't come out and so we buried it.

In this passage, the way Sara tells her story shows a direct association between plastic pollution and animals' deaths and exemplifies how the discourse of plastics as the main treat for animals' welfare is becoming normalised and extended to different situations. In addition, the act of having a burial for her bunny also illustrates the relevance that animals as pets have for her. The burial, on the other hand, shows how she integrates life and death awareness into the everyday, which, as exposed earlier, seems relevant to understanding that plants and animals are also living beings.

Other children, like Ana, Javier and Enrique, showed a similar understanding of pollution and the idea of plastics in the ocean in relation to death. During the interview, they elaborated on the notion of pollution and talked about how they think rubbish could affect not only the sea and marine animals but other spaces and species. This happened after I asked them what they thought could happen if straws were thrown on the beach.

> **Ana**: They will sink…
> **Javier**: …And they will make fish die
> **Enrique:** They will go to the bottom; fish are there, and they eat them, and they can choke and die.
> **Javier**: They would think it is food. A shark, if he swallows much of that, it can choke, and it could die.
> **Adriana**: And what do you think about that?

Enrique: I think that that here the planet is going to be polluted.
Adriana: What? What do you mean polluted?
Javier: It's like if we were throwing something
Enrique: And it would be on the streets, or in the sea, or on the sand or in the sea water
Ana: Or they can be buried…
Javier: One day in the Aquaman movie, everything was full of rubbish, the water!
Ana: And I saw on TV that the world is full of plastic
Adriana: What do you think about that?
Ana: That is bad because the Earth can smell bad
Enrique: But if we get the rubbish away from the planet, our world will be healthy and stronger.

In this conversation, the concept of pollution is linked to waste, damage, an unhealthy environment, and death, moreover, pollution appears to be something they dislike and disapprove of. Javier's understanding of pollution as throwing reveals an understanding of the relationship between pollution and littering. A similar view was deployed by Valentina, who during the interview commented:

> [there is] a lot of rubbish and you have to clean up the rubbish because if you don't, the tide will drag it, everything gets polluted.

> (Valentina, Sailors group)

These messages about rubbish and pollution, seemed to be influenced by the media too. Nonetheless, even when they referred to videos or images they had seen on TV or social media, rather than seeing rubbish as a distant problem or showing indifference, they presented it as a common situation in their everyday lives:

> **Adriana**: Have you seen that [rubbish]?
> **Javier**: Sometimes I dig, and I find rubbish
> **Ana**: I even see people littering on the street and in the sea
> **Javier**: Whenever I go to the beach and I find rubbish, I pick it up. Like one day a boy dropped rubbish, and he was friends with my mom, I picked it up...
> **Enrique**: Every time that I go to the beach and want to jump in the water there is a layer of rubbish and I find it disgusting. And I walked away and, where I don't see rubbish -there are some parts where there's no rubbish- I went there, and I relax in the water

Rubbish is referred to as something that is common, that they do not like, and that concerns them, thus exposing the familiarity and frequency with which they encounter this situation and how it affects them. During the interview with Mónica and Paco, they also talked about pollution, and their conversation brought to the surface other current social problems.

> **Mónica**: They are <u>polluting</u>! Look!
> **Adriana**: Did you say polluting? What does that mean?
> **Mónica**: They are killing something that is important.
> **Adriana**: What do you think about that?
> **Mónica**: That plants could die.
> **Paco**: And fish too.
> **Mónica**: Because rubbish comes closer…there are many thieves that think plants don't get hurt. That's why sometimes they put dirty boats, rubbish or branches…the thieves they don't like them, they are mean!!
> **Paco**: But thieves steal money…
> **Adriana**: Who do you think left that rubbish there then?
> **Mónica**: I think that the guys came to drink beer…and they put it in that cup and threw it away.

In this conversation, Mónica presented pollution as a life treat specifically for plants, which, as presented earlier, are very precious to her. The way Mónica introduced the idea that thieves harm plants suggest a link between environmental and social damage, and it unveils some of the typical social and economic problems affecting her surroundings. Although Mónica did not explicitly mention how these aspects are linked, the association seems to be constructed under a semantic logic that places together people and actions that are seen as detrimental for the place where she lives. This then indicates awareness of some common practices in the area that are indeed related and contribute to socio-environmental degradation. For instance, drinking on the beach is a common practice in this region, and often people do not dispose of their waste properly. Sadly, seeing empty cans, bottles, cigarettes or cups on the beach is very common. As explained in Chapter 3, littering and the lack of proper waste management are, in fact, some of the major environmental concerns in the whole Quintana Roo area.

6.4. Chapter Summary

In this chapter, I explored how children navigate ideas regarding the environment, EE and environmental problems, which answers sub-question three of this study. My findings show that the term environment is not a common one for children, yet for those who are familiar with it, it is associated with nature, specifically plants and animals. Children's ability to recognise that other species, such as plants and animals, are alive seemed to form the basis for the discourse around taking care of other living beings, an idea that connects with teachers' interpretation of EE as taking care of the place where we live. These narratives were embedded in ideas about protection and respect for plants and animals.

This chapter also showed that children already have a notion and are willing to learn more about pressing environmental problems such as plastic in the oceans and littering in relation to the negative effects these might have on other living beings. The following table summarises the findings.

Sub-question three: How do children navigate ideas regarding the environment, EE and environmental problems?	
Ambit	**Key findings**
Environment	Not a common term
	As nature: plants and animals
	Associated with other terms: Mother Nature/Mother Earth
Environmental Education	As taking care of other living beings. This includes: • Environmental knowledge: learning about plants • Developing empathy and a sense of connection: recognising similitudes and valuing other forms of life • Normative discourses: compelling with the norms • Proactivity: taking a stand and acting to protect the plants
Environmental problems	• Plastics in the ocean and pollution are the most common concerns • Associated with littering • Seen as real problems that they experience and are worried about • As a threat for plants and animals: it can cause their death.

Table 11. Children navigating ideas regarding the environment, EE and environmental problems.

7. Parents' Understandings the Environment, EE and Sustainability

The aim is to explore how parents understand the terms environment, environmental education and sustainability and what has influenced such understandings. Although parents are not the main focus of this research, their views are relevant to exploring the ways in which meanings of the environment, EE and sustainability from a different viewpoint to the teachers and the children circulate around the preschool and how these reproduce, resist, contradict dominant discourses, or expose alternative ones. This serves to expand the spectrum of meanings and the ways in which different discourses converge and bifurcate.

This chapter focuses on the various interpretations of the terms environment, EE, and sustainability. Given the multiplicity and interdependence of the responses, I do not present the findings for each preschool separately, instead I have grouped similar perspectives regarding each of the three terms into three sections: understandings of the environment then understandings of EE and finally understandings of sustainability.

7.1. Parents' Understandings of the Environment

Two main understandings of the environment were identified. The first is the notion of the environment as comprising both the natural and the built environment or what is human made. The second one refers to an understanding of the environment as nature only, encompassing explicitly what is not-human made. This notion of the environment also relates to the idea of reconnecting with nature and forming a sense of belonging. The following diagram summarises these findings:
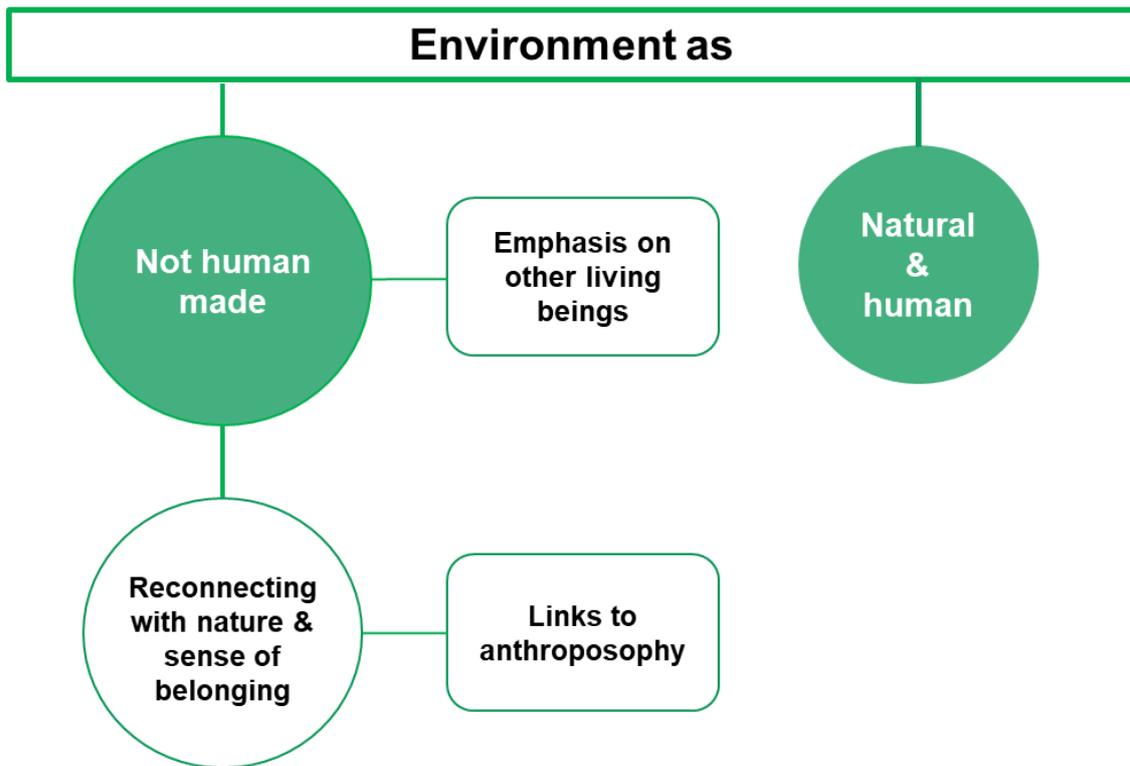
Figure 23. Parents' understandings of the term environment.

7.1.1. Environment as Nature: Not Human-made

For most parents, the term environment meant the natural world only. In this sense, environment is seen as a synonym for nature, which is defined as the elements that exist in the world that are not human or have not been created by humans. Some examples of this interpretation are:

> It is the space where we are, where we live, but environment for me is nature, it refers to nature only.
>
> (Daniela, City Preschool)

> It's what you see, and you don't see, the trees, the air, everything that is in a natural state…for me is only what was created in nature.
>
> (Laura, Waldorf preschool)

Parents who defined the environment in these terms did not elaborate much but rather mentioned elements that, for them, form part of the environment, such as plants, animals and natural resources, or the ecosystem. For instance:

> Environment, well is the planet Earth, is everything, for me it's stuff like the air, trees, animals, oceans

> (Silvia, City Preschool)

> Environment is nature…the trees. Environment for me means the ecosystem…more like nature, what surrounds us, what is natural.

> (Vicente, City Preschool)

Linked to the idea of the natural environment as not human-made, a few parents (3 of 22) highlighted life and other living beings as the main components within their understanding of the environment, for instance:

> Is everything that has to do with a living being…because in the end is about that, is the habitat in which they develop. Even a plant is alive, in fact, my daughter is like, "Mom, look they are cutting the plants", she already knows that a plant or a tree, everything has life in an ecosystem.

> (Clara, City Preschool)

As seen, the idea of plants as living beings that have needs and form part of the environment is stressed; moreover, Clara makes a direct reference to her daughter as a source of knowledge. The similitude between this account and children's ideas of taking care of other living beings is a clear example of how what children have learned at the botany club has influenced parents' understandings of the environment.

These interpretations of the environment as what is not human-made are also the basis for a different understanding of the environment that, instead of centring on the idea of flora and fauna, moves towards the conception of nature as a spiritual space, which I discuss next.

The Sense of Connection and Belonging with Nature

Linked to the idea of the environment as what is natural, all the parents from the Waldorf preschool, except Sol, referred to the idea of forming a connection to nature. They presented the environment as something that has been created by nature and thus is bigger than humans and pre-existing humans and goes beyond the material world. The key message within this interpretation is that nature has an intrinsic value

that is linked to aesthetic and philosophical worldviews. Laura, for instance, expanded on this idea:

> In yoga terms, environment is the origin of everything, like Pachamama, where you come from and where you will go back, it's the feeling that you're part of everything…a sense of being part of something bigger, knowing that there are other species, that we are all part of nature.

Laura is a Yoga instructor, and in this extract, it is possible to see how her understanding of the environment was influenced by a particular cosmology that relates to her profession and personal beliefs. At the centre of her interpretation is the notion of belonging and forming a connection with nature.

Marta also defined the environment as nature-only, and she referred to personal and spiritual practices to explain what the environment means for her. She used the example of a meditation she likes to explain the following:

> The other day I was listening to a meditation that goes like this: "There's nothing in nature that's chaotic or too much. Without human intervention, in a natural way, nature always finds the right balance." For me, nature is an example of abundance.

For Marta anthroposophical principles influenced to a great extent her views of nature as can be seen in the following extract from the interview:

> The anthroposophical approach says: "Why is nature so important?" Because it was created by God and we are created by God, if you learn to appreciate each thing that God has created, you are respecting that balance.

In this case, Marta directly associated anthroposophy with the notions of balance and omnipotence. Such ideas relate to the interpretation of nature as a philosophical and spiritual space and the idea of living in harmony with the environment that was dominant at the Waldorf preschool. This makes clear the strong influence that her way of understanding the principles of anthroposophy has on her understanding of the environment as nature and the value of nature.

For Marta and her husband Mario, the idea of forming a special connection with nature and the importance of spending time outdoors were also highlighted, and they associated this with the Waldorf preschool ethos too. Interestingly, spending time outdoors and bonding with nature are not activities they enjoy themselves, but they

still believe it is important, particularly for the wellbeing of their child, as Mario explained during the interview:

> I don't like nature because there are mosquitoes and bugs…My dad used to tell me, "Let's go—because he is an agronomist—let's water the plants, let's sow, and let's go to the farm." But I didn't like being under those conditions…in the middle of the jungle and those things, I didn't like that. But then, with what's happening now with my son, I'm trying to do it. Somehow, this has made me see so many possibilities. If you get a mosquito bite, then you just put on some cream, and if you don't like it, you can leave, but it's more about sharing with him the little adventure of the rock, the branch, the leaves, the bird…I think he [his son] looks at me differently. I mean, I look at myself differently! So, it's about re-educating ourselves, it's like, from what he is and his connection with nature, his school, then we are also changing. We also attend a parenting workshop [based on Waldorf] with a teacher who once told us, "How could you teach your child something if you're not doing it yourself?"

Similarly, Marta said:

> I'm a very sensitive person, so when I'm not feeling ok and I go out, I feel overwhelmed by the energy of the plants. I'm out there for 10 minutes, and if my husband is there, I often tell him, "Hey, I need to leave," and I go home. I'm happy staying home; really, that's the way I grew up. If it weren't for the school, my son wouldn't have those experiences [in nature], and if it weren't for the school, I wouldn't understand how important it is.

For Mario and Marta's son's education, the preschool ethos and pedagogical model act as powerful discourses that motivate them to change not only the way they define nature but also the way they relate to it, to the point of trying to change old habits. Notably, there is a narrative around living their own childhoods disconnected from nature as a negative aspect that they do not want to pass on to their child. Spending time outdoors and enjoying nature is seen as a fundamental aspect of the wellbeing and upbringing of their child, an idea that resonates with the discourses around nature deficit disorder and the notion of re-connecting children to nature (Louv, 2005).

7.1.2. Environment as Both the Natural and the Human Worlds

The second understanding refers to the environment as something that inevitably encompasses both human and non-human aspects of life. The emphasis is on the relationship between the natural and social-built dimensions of the environment, highlighting the interconnectedness of humans with other living beings, with natural and not-natural elements, as well as with socio-economic aspects. In this sense, the term environment has a broader meaning as it goes beyond the green or natural connotation alone. Importantly, environment was explicitly defined as including what is human-made, and in this vein, the term environment evoked narratives about the complex relations between the natural world and humans, including aspects such as human survival, human creations, and coexistence. This interpretation was identified among six parents; for instance, Ricardo from the City Preschool explained:

> The environment is everything that is around us—absolutely everything. What we see and feel is the environment, where we coexist every day: the air, nature, even concrete…all that is the environment in which we live and develop.

Similarly, Pedro from the City Preschool described the environment as:

> All that surrounds us... It includes what's natural and man-made. The environment is what we create, what is already there, and how we integrate it, as well as how the different species integrate... The environment is what we all do, whether balanced or unbalanced, it is still the environment. The environment is thus what we all do together.

Sol, from the Waldorf preschool, highlighted the idea of the local and immediate environment that is lived and experienced every day:

> Environment means everything around us... I mean, just going out or being at home, everything seems to me like the environment. Before, when I was younger, I didn't see it like that; I saw the environment as something really distant, you know? Like the sea, the jungle, what's natural, and now, maybe because of where I live, just stepping outside and seeing the ground, the grass, I see all that as environment... I feel that everything is so entrenched in us.

These interpretations of the environment acknowledge the interplay and tensions that exist between the natural environment and human development, aspects that are tied to social and economic matters too. Within these two appraisals, it is

interesting to note that human input is acknowledged, yet not seen as entirely negative. This interpretation of the environment as both human and not human-made evokes perceptions of the environment as local, imperfect, unstable, and with changing conditions in which both the natural, social, and built environments are in constant interaction.

This view of the environment is also similar to the one identified at City Preschool regarding the idea of the environment as 'the place where we live', in which the environment, rather than being understood as an untouched or pristine place, is seen in constant interaction and even in tension and conflict with human beings.

In the next section, I present the findings regarding parents' understandings of EE and insights on how these are formed.

7.2.   Parents' Understandings of EE

As a starting point it is important to say that most parents understood EE as a type of education specifically aimed at learning how to take care of the environment, however, I identified three key different discourses. Firstly, an understanding of EE that highlights knowledge as instruction, where the aim is to tell others what to do. Connected to this interpretation are notions of personal responsibility and habits such as being clean and not littering. A second interpretation refers to EE as acquiring conceptual or scientific knowledge about the environment, where knowledge is seen as a means to facilitate and advance understanding of the natural and social world and the complex problems that affect it. The third interpretation is that EE is about developing awareness and respecting nature by reflecting on the impact of human actions on the environment. This third interpretation had two different strands, one centred on the idea of bonding with nature and the other influenced by the idea of human rights. The following diagram summarises these findings and in the next section I explain all of these in more detail:
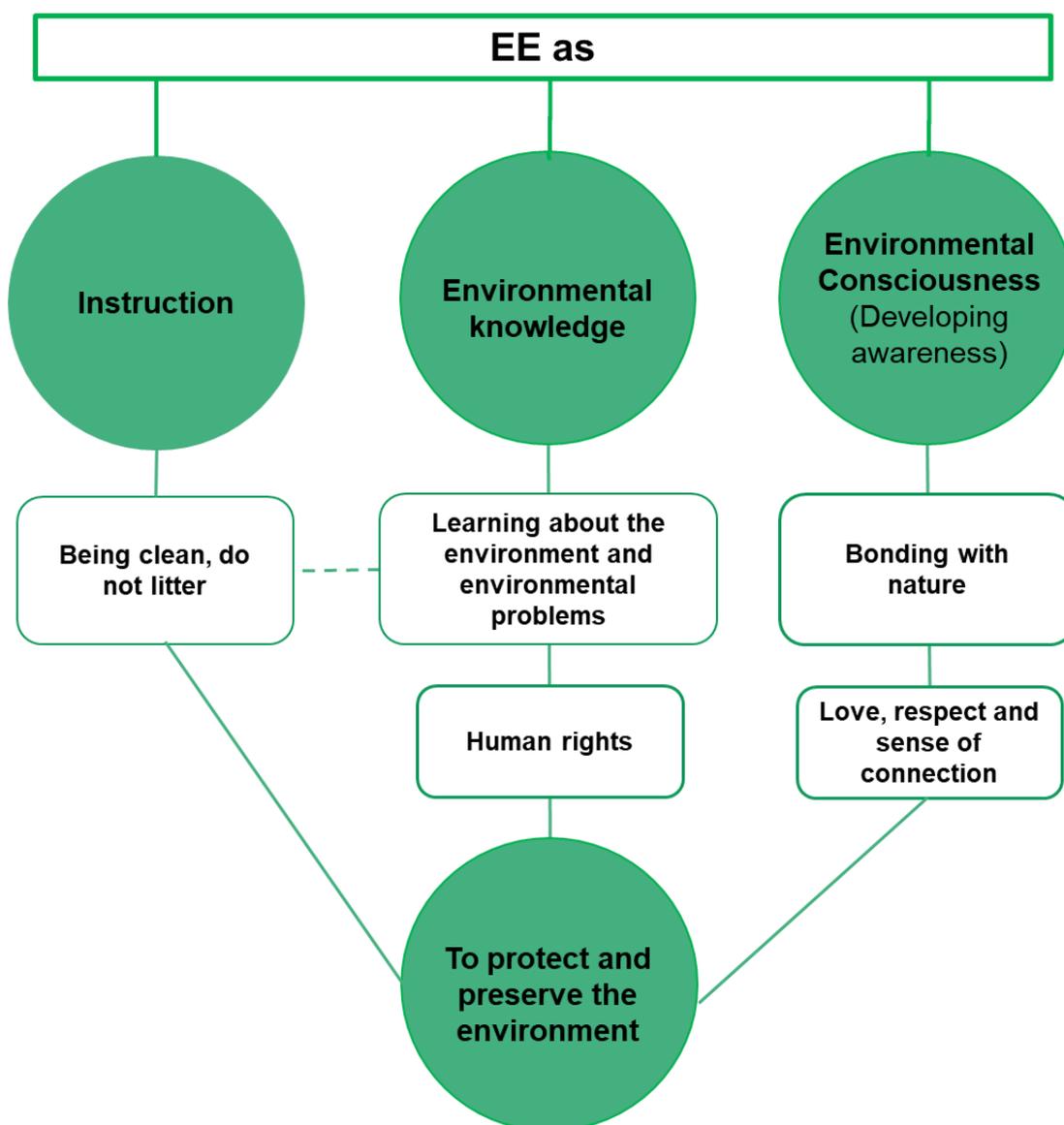
Figure 24. Parents' understandings of EE

7.2.1. EE as Instruction: Be Clean and Do Not Litter

The first interpretation of EE emphasises learning about the environment, but learning is understood as instruction, or in other words, telling others what to do or not to do to protect the environment. In accordance with this understanding of EE, the purpose of learning and knowledge is more persuasive and practical than academic or scientific. There was also a tendency to associate EE with individual actions related to personal choice and responsibility, such as refraining from littering, which was a common example as can be seen in the following extracts from the interviews:

EE would be to tell them [children]: "Do not litter! "Put [the rubbish] where it should go; there are bins; do not cut the tree if you don't need it; don't hunt an animal if it is not going to be used for feeding." I do worry about the environment and try to do my part, but not to the point of making campaigns or things like that.

(Clara, City Preschool)

"Environmental Education is taking care of the environment, not littering, trying not to consume too many plastic things…that's what I have heard".

(Romina, City Preschool)

Notably, cleanliness habits appear as key environmental learnings or practical actions which also connect with issues such as waste management and consumption. Not littering and being clean are viewed as ways of avoiding further environmental damage and framed as pro-environmental actions. For instance:

"Environmental Education is everything that has to do with cleanliness, habits such as taking care of plants and not littering on the beach".

(Nadia, City Preschool)

[Environmental education] is precisely the way in which we relate to our environment, I mean, the way in which we relate to the space where we live, with everything around us. Starting from our own home, rubbish, our habits, our cleaning habits.

(Sol, Waldorf preschool)

Other parents elaborated more on the idea of being clean in relation to not littering:

I think that everything that has to do with the environment is important. I'm one of those people who tries to do it. I'm not the guy who has the initiative to create social events and let's get together and clean, but I am a person who doesn't litter on the streets... I'm a very clean person who keeps areas clean. If I see something that bothers me, I pick it up. I'm also one of those people who, well, it has happened many times; I don't know why I am like that, but if I'm walking and someone drops rubbish, if I know the person, I do tell that person: "Hey, sorry, but you dropped this," so they notice what they did.

(Claudio, City Preschool)

These explanations, especially the concept of cleanliness, emphasise individual responsibility, personal ideals, habits, and even personality as driving factors behind caring for the environment. This is evident in Clara's and Claudio's examples, which highlight the fact that they are not eager to participate in, or organise collective activities, but rather believe they can still do something for the environment on an individual level without having to get involved in community events. Nonetheless, the concept of influencing others remains, emphasising the importance of the interpersonal dimension in disseminating pro-environmental messages and personally influencing others in one-on-one circumstances.

Remarkably, Claudio argued his interest and worry for the environment have been influenced by a popular singer:

> I follow Michael Jackson a lot, I really like his music. His songs, the lyrics and most of all the videos related to children and the environment. These has given me some awareness and I try to look after the environment. His videos really were ahead of his time, showing environmental destruction, but then you kind of think, well it might actually happen...

Other parents like Vicente also spoke about the influence of the media and referred to the popular video of the turtle with the straw:

> Environmental education is about not littering, about recycling…for instance currently with social media you see the turtle with the straw sticked into its nose and so that's why we don't use straws anymore.

Here, it's crucial to emphasise that the media and entertainment sector are once again prominent as sources of information that influence perceptions and attitudes about environmental issues, particularly in relation to individual choices, a pattern I previously noticed among children. In the following section, I explain a distinct understanding of the environment that is related to the concept of teaching and learning how to care for the environment, but from a more formal standpoint.

7.2.2. EE as Formal Learning: Environmental Knowledge

The second interpretation of EE underlines the concept of education as a means of expanding environmental knowledge. In this instance, EE is associated with formal education and academic knowledge, particularly about environmental problems. This interpretation of EE emphasises the relevance of obtaining accurate and pertinent

knowledge that allows people to be informed about the environment and the problems that affect us. Associated with this is the belief that environmental education can instil environmental attitudes and behaviours in the future. For example, Diana from the City Preschool defined EE as:

> Environmental Education is to educate, to provide all the information about what the conditions to preserve the environment are, that is, what makes possible life on Earth and how we can learn or clarify such concepts to help preserve the environment.

Likewise, Daniela interpreted EE as:

> Environmental education is the knowledge about how we could affect or protect our environment…Knowledge about what is good and bad, because it is not only about learning what's good, but you also need to know what's wrong, so you don't do it.

Similarly, Pedro spoke about the relevance that formal education has for constructing a better understanding of the environment and the problems that affect it. Pedro's account below also shows that his view of the environment is highly influenced by what he learnt at school when he was younger and which he still considers relevant:

> Since I was a kid there were researchers and biologists that came to tell us about climate change. I remember when I was in primary school, I studied in Mexico City, and I remember a young guy came to give us a lecture and he explained that we could still revert climate change. He said: the temperature of the Earth could increase 6 degrees, it might not sound like too much, but imagine if your body temperature is normally 36 degrees and it increases 3 degrees, you'll be 39 degrees and that is actually dangerous, 3 degrees more and it can be mortal. Same with the Earth he said.

The accounts of Diana and Pedro demonstrate that formal education is deemed necessary to comprehend how the environment functions and how individual actions affect the environment. Pedro also discussed the acquisition of environmental knowledge as the beginning of a process that could lead from comprehension to action:

> Since we were young, they taught us concepts, but you don't really understand what's in your hands and what's not. It wasn't until I turned 30, when I had another teacher who was very committed to the environment,

that it all made sense to me. She said - if you buy a product, you're buying the package or wrapping too, then you throw it away, then it is rubbish, you need to classify and see what the implications are.

In this passage, formal education and teachers are presented as key in the process of educating about the environment, yet the time lag between acquiring this knowledge and taking action is also acknowledged. To this regard Pedro added:

It's been a slow process, I have received advice from many people who care about having a healthy or harmonic environment, but all this information to create a strategy to say, ok let's do this has not, it didn't integrate as quick as it should have. It's only recently, like 4 or 5, years ago that my wife and I decided to classify waste and recycle.

While the examples of EE emphasise scientific knowledge, I identified a different narrative that brings together formal education and human rights, which was mentioned by Sol from the Waldorf Preschool, who explained:

I now think of environmental education as human rights, because is really the relationship and the education we all must have, starting with children, in order to relate with, well basically all around us…We all need to have some sort of basic education to understand, I mean EE is having that education, is like studying civic education, I think EE would be similar to civic education so you can then understand how to live in a sustainable way.

Sol's description of EE and the comparison with human rights offers a view in which EE is seen as essential education that everyone should have, thereby linking the concepts of access to education and meeting fundamental needs with sustainability.

In the next section I explain a different understanding of EE that moves from the idea of formal education to the notion of environmental consciousness.

7.2.3. EE as Environmental Consciousness

A third common interpretation of EE is predicated on the notion of raising consciousness or developing environmental awareness. This understanding alludes to inviting others to consider the effects of human actions on the environment, and it is closely related to the concept of developing a sense of attachment and responsibility for nature, where self-reflection is emphasised. The central tenets of this conception of EE are fundamental values such as love and respect, as well as

the notion of meaningful learning in which intrinsic motivation and self-care play a significant role.

> **Mario**: When you say environmental education, is about forming some sort of consciousness, a logic even in terms of sharing and coexisting with nature.
> **Marta**: for me environmental education is understanding how everything has a relationship in nature and then learn to respect it and getting to know her… It's about learning to respect nature, but not from a dogmatic stance of, "You must respect just because I say so", but rather realising that you're connected to it…Like the way they do it at my son's preschool…it's an environmental education but not so…
> **Mario**: not so punitive…
> **Marta**: not exactly punitive, more like… not so intellectual. Not about saying, "if you litter, you're polluting" no, is more like you must love plants and nature because is like loving yourself.

Also emphasising the importance of relationships, values, and the idea of education as more than instruction María from the City Preschool said:

> Environmental Education would be learning to respect plants and people around us, animals…trying to understand them, mainly that, respecting them…Is more about being conscious about how harming plants affect us, so they [children] are aware that respecting the environment, taking care of the environment, of plants and animals is useful because we're all one. Most of all that she [her daughter] knows that taking care of the environment will be good for her, so she knows that, "by taking care of it, I'm actually helping myself". So, she does it for herself rather than to please others.
> Is not so much about telling them [children], "what you're doing is wrong." Otherwise, the child sees it as, "I'm going to do this secretly, so my mom doesn't see, because is something wrong." No!

Mario also expressed very similar opinions regarding the relationship of children with nature:

> The connection with nature is intrinsic. It's like you love nature because you love yourself; how are you not going to love yourself? It is a very symbiotic relationship; it's immediate; you won't hurt yourself, and since you don't hurt yourself, you don't hurt nature. If you see rubbish, you pick it up because it is you who you would be harming, or if you hurt a tree or animal, you are harming yourself too.

These accounts stress the idea of self-care and intrinsic motivation, highlighting the importance of making EE meaningful for children. Moreover, this perception connects with a stand against the notion of EE as instruction or authoritarianism, which is furthermore associated with an academic and subject-like model. To this regards Mario added:

> I don't believe in traditional education, I think that before learning the alphabet is more important to learn how to socialise, be in this world and understand it.

EE as awareness is here presented as an alternative to hegemonic education models based solely on academic knowledge, which are typically associated with education about the environment approaches and often linked to 'traditional' styles of education.

Finally, it is also important to note how Marta and Mario again present the Waldorf Preschool as an alternative type of education which again acts as their main referent for their interpretation of EE, particularly with regards to the idea of love and connection with nature during early childhood.

7.3. Parents' Understandings of Sustainability

Overall, the term sustainability was not a common one among parents. Most admitted they had heard of it but were not entirely sure what it meant. Despite not being familiar with the term, the majority of parents provided useful insights about what they believe sustainability is about, while only three parents skipped the question. Two main understandings were identified. One is an understanding of sustainability in relation to aspects of survival and future generations, and the second is to see sustainability as a set of practices that can be maintained over time.

Notably, parents placed their job as the main reference to explain sustainability and offered clear examples of how sustainability is practised in their workplace, which I also explore further down.

7.3.1. Sustainability and the Survival of Present and Future Generations

The concept of sustainable development and the narrative of preserving life on Earth were integral to the comprehension of sustainability as survival. At its foundation is a reference to the present and future generations, with the natural environment framed in terms of the limited resources required for human survival. To illustrate, Carlos from the City Preschool, stated:

> Starting with the definition of sustainability, it means to preserve our surrounding and the environment not just for the present generation but also to look forward, thinking about future generations that are yet to come; taking care of it for you and for those to follow, and that definition makes sense to us because we have a child and we know that she will face a complicated world, difficult, where nature as resource is finite. The old idea [of nature as infinite resource] on the contrary is obsolete. So [sustainability] is about caring for the survival of those who are here now and those who will come.

Also emphasising the idea of future generations Diana, said:

> The environment for me is the basis, the most important aspect we should look after in order to live on Earth for a long time…and not only us, also the future generations, is about being sustainable.

These accounts revolved around the idea of endurance, highlighting the interrelatedness between natural resources and human's needs. In this sense the adequate use of natural resources is seen as fundamental to preserve life on Earth now and in the future.

Similarly, Emilio related sustainability with human survival but, instead of referring to natural resources he spoke about global warming showing a rather fatalist view.

> When I think of sustainability, well…since a long time ago with the little knowledge that I had, I thought—I didn't say this to anyone—but the idea that we're all going to die because of global warming was always at the back of my head.

These examples seem to have a more critical view about the environmental crisis. Likewise, they incorporate aspects that can be associated with the messages promoted by international organisation such as UNESCO. For instance, the notion of intergenerational survival and the consequences of global warming.

Linked to the idea of survival, I found a slightly different interpretation that focuses on the idea of sustainable practices, which I present next.

7.3.2. Sustainability as Practices that Benefit Humans Without Harming the Environment

Another understanding of sustainability highlighted the notion of development and human practices that can be maintained over time. The emphasis is on the idea of using resources in a responsible way, so that humans can enjoying the benefits of nature. For instance, Pedro said:

> Well, it is everything that implies a development but respecting the resources. Not producing rubbish, taking advantage of what is at hand. Use the materials of the area to avoid transport... Organic gardens.

While Clara explained:

> Well, I understand by sustainability that it is, let's say, something that in some way does not have a negative impact on the environment. For example, right now houses are being built with some green areas on the roof. For example, I don't know what it's called, but something architects do is put something on the roofs that makes the inside of the house feel cool, and that also allows that in some way, let's say, not to exploit other things but to use what we can at a given moment, our resources. So, for me, sustainability would be that part: looking for ways of using things that can benefit us without harming the environment or the ecosystem.

Similarly, Daniela said:

> I have an idea of what sustainability is, is like…making that the resources we work with are not that bad for the environment, use them in our favour.

Something worth noticing is that none of the interpretations of sustainability referred to the preschool or formal education environment, instead, they alluded to practical actions that link with other economic sectors such as the construction industry or tourism. This emphasis was more evident through parents' accounts of how they have learned and experienced sustainability in their workplaces, which I present next.

7.3.3. Sustainability in Practice: The Influence of the Workplace

A recurrent theme among parents was the influence that their workplace had for them in terms of understanding and practicing sustainability. Diana for instance explained that she had learnt about environmental sustainability when she was working at one of the major nature parks in the region:

> There is an extensive training for employees about sustainability, sustainable tourism and the environment, there [in the park] is where I think that idea stuck to me the most…it's something that is transmitted to employees a lot…about doing good practices to maintain the environment, or at least keep it as we found it and then try to preserve it for future generations.

Moreover, Diana mentioned the following practices taking place at one of the parks where she used to work:

> We [the employees] used to do compost, we had a waste collection centre… at the office we classified our waste and we used to go once a year to the collection centre, and we were taught how it was done, and well, there we were with our face mask, gloves and everything!

Similarly, Emilio explained that he was acquainted with the term sustainability because he had received information and training about it; and he showed me a leaflet about sustainability that was given to him at work. For Emilio, sustainability was portrayed more as a set of practices, or habitual procedures, particularly those related with classifying waste and recycling:

> Well, yes, waste separation for instance has now reached such level of organisation…the guests always leave food leftovers, but the bin where we put food waste is not the same as the one where we put toothpicks…the place where you put organic and biodegradable stuff is not the same as where you put ketchup sachets and so on, now there's a place for everything.

These accounts show how Emilio's and Diana's ideas and experiences regarding sustainability have been highly influenced by their workplaces, both of which belong to the tourism sector. The accounts are also an example of how parents have had the chance of learning through 'hands on experience' or learning by doing and how these events marked and influenced their knowledge and perception of the environment.

The reference to experiences, practices and opportunities for professional development in the workplace shows the strong and influential role that organisations have on people's ways of doing and acting. Emilio for example spoke about how the transition to sustainable practices at work, namely, newly implemented processes to classify waste at the restaurant, helped to achieve something that initially seemed like a big and difficult challenge:

> What for me seemed like fighting with windmills, someone said, I'll take the risk, and well these are things that for us as workers imply extra work, but in general terms I think it had to be done…so, at least here (at the restaurant) we're doing something and that gives me like some sort of mental rest.

This account shows that taking risks and assuming leadership within an organisation was fundamental to change old practices that were initially seen as requiring extra work. Importantly, the fact that such ideas and practices occurred and were endorsed by organisations, seemed to validate and give more seriousness to the discourse around waste management and recycling in practice.

Other parents from the City Preschool like Ricardo highlighted professional development through courses and interaction with other professionals instead of waste management practices as one of the main ways of learning about sustainability at work:

> I'm a civil engineer, I belong to the college of civil engineers therefore we have been fortunate to work with other associations, with environmentalist groups, entrepreneurs and more people; we have had the chance to attend some talks about environmental education, water conservation and the environment…so sustainability is doing all that is possible to maintain the ecosystems. In terms of my job, is creating structures that are environmentally friendly.

For other parents, although they were familiar with term sustainability the commitment and interest to these practices was not so strong. Instead, sustainability was seen as an administrative procedure or something they did not have get involved with. An example of this position is Daniela who during the interview explained:

> I work in an eco-hotel (laughs)! How terrible! It seems like I know nothing! I am receptionist, sorry! In fact, at the hotel where I work, they are all

about that [sustainability]. It has so many campaigns, for instance, now we have one…if you take half a litre of used cooking oil in a bottle they give you a plant…there is another one, they don't give you anything in exchange, but is about taking your cigarette butts…only one of my colleagues who smokes a lot does it... there is another campaign about recycling but the truth is that no one does it, or not that I know, and we are 20 people in my office.

Similarly, Julieta who owns a small business attached to hotel explained:

Yes, I have heard it [sustainability], mostly in hotels. These are, I think, norms or some sort of projects something that has to do with taking care of nature. In this case, at hotels is recycling, help to make the environment better, sustain it, something like that.

In Julieta's case even though she has heard of sustainability, it does not seem to be something relevant for her. These two examples show how sustainability is still not something fully integrated into everyday practices, importantly it presents a view of sustainability as something that is regulated or standardised by third parties, rather than something that interests them, or they can become more involved with.

7.3.4. Chapter Summary

Overall, the understanding of sustainability presented in this section show that there is a strong link between sustainability practices and parent's workplaces. It also made evident that some parents have good knowledge and strong commitment to undertake such practices. However, the constant reference to their jobs as the main source for gaining an understanding and practice sustainability also suggests a disassociation of sustainability with aspects related to education or children. Different from the ways in which the notion of environment and EE education are constructed, sustainability was not linked to any preschool practices and was mainly presented as something that belongs to a different sector, more oriented towards business and service and targeted at adults.

Finally, parents' responses show that, regardless of their level of commitment, waste management and recycling were championed as the main activities to take care of the environment. As seen in previous sections these examples were common too when talking about EE. Moreover, these were also aspects that teachers and children addressed.

The analysis also revealed some possible influential discourses that act as sources that inform parents' views of both the environment and EE, such as the mass media, scientific knowledge learnt at school, philosophical and spiritual beliefs. Children's wellbeing and education also emerged as a rationale for the different interpretations of the environment and EE.

8. Exploring Images of Childhood

This is the last of the five findings chapters, here I identify and analyse dominant images of childhood at each preschool by examining the beliefs and assumptions that teachers and parents have about children, such as who or what they think a child is, what and how they believe children should learn, and why. The chapter is organised in two sections, I start by introducing the idea of the spiritual child, which was the dominant image at the Waldorf preschool, then I examine five core beliefs that are connected to this image. In the second section I present the two dominant images found at the City Preschool, these are the adult in training and the child as social agent and I follow with an explanation of five key statements that connect to these images.

8.1. The Waldorf Child: The Spiritual Child

The image of the child as a spiritual being suggests that children are regarded as special souls but are not yet necessary as people or simple humans, hence showing a resemblance to the notion of the child as divine. This view is strongly influenced by Waldorf pedagogy and has many parallels with the romantic ideas of the innocent child, as will be shown throughout this section.

Gardenia, for example, described a child as "a spiritual being that has just arrived on earth with many presents and lessons for adults", which suggests that children carry with them some type of spiritual baggage, an idea that was shared by Dalia, who explained:

> **Dalia:** Children are wise because they come from a place, well, for this pedagogy—this is how I learned it—children come from a higher world. So, they bring that knowledge from the higher world, and they come here, and they want to learn about the physical world because they don't know it yet.
> **Adriana:** What do you mean by higher world?
> **Dalia:** It is called the spiritual world… The idea is that the child comes from this spiritual world. He has a superior knowledge and knows more than we can imagine… the child has a function, a mission to fulfil, that's why he comes. So, the teacher or the adults around him, the only way they should intervene is by helping them fulfil that mission. What is his mission, I don't know, he himself will know.

These examples demonstrate how the image of children as spiritual beings reflects the influence of Steiner's ideas around occult science, which forms the basis of anthroposophy and is also the key to the discourse of Waldorf as alternative pedagogy.

The emphasis on spirituality and the idea of children as beings who arrive in an earthly world also bring to the surface another important element within the Waldorf discourse, which is linked to a view of the teacher as a guide but also as a maternal figure, as can be seen in the following extract from the interview with Dalia:

> a child is a being that is full of different qualities. It is not a container that must be filled. It is a being that has a mission. It has come here to accomplish something; it is not here by chance. And what is our role in his life? Accompany him so that he can take that path.

Gardenia expanded on the ideas of guidance, spirituality and the maternal role of the teacher by referring directly to Steiner's ideas to explain why they had some pictures of the Sistine Madonna on the wall:

> Steiner claims that Raphael, like Michelangelo and DaVinci, received or had a very close connection with the spiritual world... So, this Madonna is therapeutic because she has the gesture of a mother, and if you look at her well, she is representing the union of the spiritual world with the earthly world. Look closely, and there are the curtains that have the stars that represent the celestial impulse, and there are the angels above and below that are like all that force that protects us at birth.

For Gardenia, the concept of maternal care is also associated with living in or experiencing a sense of harmony with the environment, a concept that relates to the physical environment and beauty aspects.

The idea of harmony is reflected in the aesthetics, as the decoration is trying to simulate a beautiful and warm environment in which children can live for the first seven years, which is related to the concept of motherhood. What we try to do is have children see pink tones, because, when you're inside your mother's womb, all you see are reddish and pinkish colours with light contrasts, and that's what we want to simulate in early childhood so that children can continue to live this extension of the maternal environment.

Echoing the idea of the spiritual child that has just arrived in this world, Eugenia expanded on the notion of spirituality:

> There is a very important point here: one thing is religion, and another is the spiritual part, and we handle it more as this spiritual aspect from the idea of the archetypes and the Madonna's, from the idea of this mother who takes care and shelters, which is something fundamental in kindergarten and primary school, [which is] the care aspect.

It is interesting to note how the three teachers used the word beings instead of people to describe children, and they all place children as arriving and bringing something important to this world. A similar discourse was present within Mario and Marta's view of children:

> **Mario:** A child is a spirit on Earth…the reincarnation of a spirit on Earth— a spirit that has not awakened yet.
> **Marta:** I believe that [the child] is a human soul that knows many things but is not able to remember them until later, a soul that comes to contribute something to the world... that needs to be taken care of until he manages to wake up.
> **Mario:** Because we believe in reincarnation.
> **Marta**: It's a soul that just arrived.
> **Mario**: It's like he [the child] is like, "what? How did I get there, what did I do? How? When? What day is today?" It is very romantic, but in Waldorf pedagogy they see it that way, and it makes a lot of sense to us because I remember that I was like that [when I was a child]... but when I finally got it, when I realised that "oh! the Earth, the world, the war" I realised I identify myself with certain things that I really have no idea where they came from, and that's when I say, "I have an old soul, older than me".

In Marta and Mario's example, it is possible to see how their conception of a spiritual romantic childhood is a combination of personal experiences, spiritual beliefs, and anthroposophy, which suggests that the Waldorf pedagogy is not only seen as theory or an educational method but as a lifestyle. Overall, these examples corroborate the influence that the Waldorf principles have on both teachers and parents, particularly in reproducing ideas not only about who children are but also how and why they should be seen and treated.

Moreover, this narrative is parallel to the conception of the environment as a philosophical and spiritual place and to the understanding of EE as living in harmony with the environment, a linkage that I will examine further in the discussion chapter.

Next, I present four dominant beliefs about children that are embedded in the image of the spiritual child.

8.1.1. Children act without thinking

The spiritual child's discourse portrays children as whole, talented beings with some type of spiritual mission, but I also noted that children were described as beings who are incapable of thinking and, more importantly, as beings who should not have to. These notions seem to be ingrained in narratives that portray children as beings whose bodies are separated from their minds and thoughts. Likewise, I found that teachers and parents tended to see the capacity to think and reflect as something that only adults are able and willing to do. Dalia, for instance, argued:

> Adults love to question each other; we love to talk a lot because we're adults. But little ones don't. They live in a different moment and it's not necessary to attract them through the head, because where they are at the moment, they should be doing things, not thinking.

These ideas were also prominent in Gardenia's accounts. For example, she argued that as a Waldorf teacher, it was neither necessary nor recommended to give children further explanations about environmental issues, particularly if these required verbalising ideas, because:

> It is intellectualisation, those are adult concepts in the end. Then, children could perhaps repeat them, but they don't make it consciously. Really, what I see in traditional education is that they live pretty much from concepts that in the end have no sense and are death, rather than having live experiences.

Moreover, age and aspects related to developmentally appropriate practices appeared as discourses that were influential, particularly when talking about children making sense of environmental problems:

> One [Waldorf] teacher once told me, "This pedagogy is going to have results later in adulthood." Don't hope for a 5-year-old child to tell you, "Very good, I'm taking care of the environment!" It's more like, as adults, they'll start living like that by conviction because they have experimented with it. Children might not be able to say, "The world is polluted or there's global warming," but they do know that they must classify rubbish and take [food waste] to the compost because it's part of their lives.

This understanding was echoed by Mario and Marta too:

> **Adriana:** Do you think young children should learn about the environment and environmental problems?
> **Mario:** Yes and no, because somehow you could guide them [children] but the way in which we could address it, from our point of view—because we're Waldorf and we're in this type of pedagogy—would be without intellectualisation…because children don't make that connection, that cognition, they don't think like that.

This extract from the interview makes evident the strong influence that the Waldorf pedagogy has on Marta and Mario, to the extent that they define themselves as *being* Waldorf. Importantly, their affiliation with the pedagogy also reinforces the idea that children cannot and should not be encouraged to think about the environment and environmental problems, which is also directly linked to the belief that for children these topics are too difficult to understand, as can be seen in the following quote from Marta:

> You won't hear a Waldorf child saying, "we shouldn't litter because it contaminates". Never! What you would see them do is disposing the rubbish in the bin or even picking up rubbish [that is not theirs]. More like: -look mom a plastic cap I'm going to put in the bin- but he won't tell you why or what for, or that is wrong, or people are so filthy, nothing like that. He's just not going to tell you that, yet he has interiorised that everything has a place.

A similar logic was used by Dalia to explain the lack of conversation or interaction with children during the walks:

> **Adriana**: So, do you think children are aware of the problems around littering?
> **Dalia**: When I walk with the children, they always tell me to look at this rubbish here, or someone left a lot of rubbish. They realise that they can hurt themselves with objects that are in places they shouldn't be. And also because they themselves realise that it looks bad. So sometimes they say it smells bad and things like that; they themselves realise that this should not be there, that it does not embellish or anything like that; it has no function. So, they are interested in picking it up and putting it where it goes.

These examples show that the lack of conversation and missed opportunities to discuss relevant real topics with children are caused by the weak image of the child that teachers and parents hold, which puts children as passive learners.

8.1.2. Children need to be protected

Alongside the idea that children are irrational creatures, there is an assumption that children should be protected from problematic aspects of the real world, in this case environmental problems. Again, these beliefs are directly linked to Waldorf pedagogy:

> **Marta:** The idea of the pedagogy is to make children feel that they are arriving at a safe place. Therefore, I think that if we let them be too aware of all the terrible things that we [adults] are doing by telling them, Look, you were born in a place where we litter, and animals die because we kill them", it would be like, "What!"

This example shows how, despite being aware and concerned about the current environmental crisis, Marta sees it as something that might be too difficult for children to deal with both mentally and emotionally. Therefore, shielding children and keeping them at the margins of these problems is viewed as a way of protecting children's innocence, development, and happiness. In this regard, Marta added:

> You can see so many videos on Facebook or YouTube of children 4 or 5 years old that tell you not to eat animals, and they cry, and they become vegans. I think that's because they've become so aware of this suffering, that they probably feel the animal's and the Earth's pain. Imagine growing up with that in mind. it seems to me a bit cruel to make them feel so hopeless about humanity when they are only 4 or 5 years old.

This understanding of childhood as helpless or as a victim also relates to the idea that children should stay away from overstimulation and technology. Furthermore, Marta related this to the use of TV and why she believes it is not okay, which links back to the idea of children being unable to think:

> Really, his brain cannot distinguish between reality and fiction yet. Therefore, when they watch TV, they use alpha waves, which are the same that appear during sleep, and so they think that what they are

seeing is true. That's why they start talking and moving like the cartoon, and they make sounds, and those are not real things.

The idea that children cannot think and that intellectualization should be avoided seems to influence how teachers and parents think children can and should be involved in different aspects of EE, and it is directly linked to another key principle at the Waldorf Preschool, which is that children only learn by imitation.

8.1.3. Children learn by imitation and good examples

From the statement that children are not able to think, it follows that the best and only way in which young children learn is by imitating adults. This assumption highlights the relevance of exposing the child only to good examples and exemplar adults. In Marta's words:

> They [children] don't think, it is imitation... I see my son doing things like picking up litter, or even when he's washing the dishes, he closes the tap. I was worried that he might leave the water running, but he doesn't because he sees that I close it, and his teachers do that too, so he simply does it. He wouldn't be able to explain why it must be done like that because neither we nor his teachers look for that type of learning. It's not important for us that he intellectualises things like "you must close the water tap to avoid waste". Instead, simply in a mechanical way—to call it like that—you tell him, "When you're done, close it.

Gardenia echoed this idea and talked about how it relates to EE practices at the preschool:

> It is through examples that children learn. Then, if we're walking and see rubbish, without telling the child, "Let's pick up the trash rubbish, the world is about to collapse because of pollution", they actually do it; they see rubbish and they pick it up.

The idea that children learn best from imitation and real-life examples rather than explanations or reflections is linked to the principle that children should have positive experiences and focus on what is good, beautiful, and true. Besides, this idea is used to justify EE-related practises at the preschool, as Gardenia explained:

> We teachers cook, wash, take care of the animals, and plants, and take care of the environment because it is good. It's a beautiful thing, and it's the real thing about life, so we don't have to teach them anything. They

just watch us; they have the opportunity to do it together with us. And that's how they do their own learning.

This view resembles the ideas of motherhood that Steiner highlighted in his lectures as essential for a good education. This influence is even more evident in the following explanation given again by Gardenia:

> The task of a Waldorf adult is to be an adult worthy of imitation, with beautiful, good, and true examples. So that's our task in early childhood... Have good and true experiences, especially good ones. Because the first seven-year period is about goodness. The child is so receptive that what he lives and receives is what he becomes...So that has to be good.

This example shows that the narrative of being good, beautiful, and true is still present and directly associated with the idea of learning by example. In this quote, Gardenia also speaks of stages of development, which brings to the surface another idea that is fundamental for the construction of the Waldorf child.

8.1.4. Emphasis on 'natural' development and health

Another key assumption about young children and education is that the first seven years of life should focus on physical rather than cognitive development. Importantly, the priority given to children's physiological development is linked to ideas on healthy development, and it appears as an argument against practices such as reading and writing at the preschool level. In this regard, Eugenia commented:

> SEP asks that when children finish preschool, they have an idea about reading and writing, whereas in Waldorf, what we seek is that children are mature in terms of their physiological development. That the child grasps [concepts such as] up and down, behind, in front, pincer grasp, but in practical terms. We address more than anything physical development because it is said [by the pedagogy] that physical development is the very first thing we should develop... All that we do at the kindergarten is oriented towards the physical aspect, so the child grows healthy.

Gardenia expanded on the idea of physiological development and health and linked it to the concept of vital forces:

> What we want is for children's vital forces to be strong and healthy to achieve physical development. I mean, not only gross and fine motor coordination but also the development of their organs, the heart...

intestines, kidneys... I [as a teacher] also take care of the organs, I want children to breathe well, have a good sleep, and eat well. We also take great care of food; we do not give them dairy products, we do not give them sugar, and we are vegetarians. Not vegan, but we try to make it nutritious and with a soft palate so that little by little they can have these encounters with food.

This idea shows the links between the notion of Salutognesis she had mentioned before, highlighting the importance given to health and wellbeing rather than just motor skills, which are aspects that relate to the view of living in harmony with the environment. It is interesting to note how daily life actions such as eating and having a specific diet are also connected and influenced by Steiner's ideas and associated with a specific lifestyle, which furthermore links back to the principle of teaching only what is good, beautiful and true. In this regard, Gardenia added:

The child lives in health, in goodness, in truth in well-being. Then what the child learns is to do good, beautiful, true things. They do not live from what's bad, they go towards what's good. The child lives in health, in goodness, in truth and wellbeing.

These examples show the influence of discourses on natural development, which show a clear influence of Steiner and Rousseau's ideas regarding the focus on physical development during the first years of life. The emphasis given to the physical body also evidences how cognitive skills are not recognised, and thus these ideas also reproduce the view of the child as innocent and irrational.

8.1.5. Not a democracy

There is a final aspect related to the way in which children were 'managed' that brings to the surface an important aspect with regards to children's and adults' participation and collaboration. Although children at the Waldorf Preschool were commonly invited or allowed to take part in different activities such as cooking, cleaning and helping teachers with some tasks, they were not encouraged to propose ideas or activities or to explain or ask questions. They were instead just allowed to join in with others or the teacher in certain activities when the teachers allowed them to do so.

Talking about this situation with Dalia, I asked if this had to do with the way the work and establish rules at the preschool, to which she responded:

> **Adriana:** How do you set rules or agreements at the preschool?
> **Dalia**: As they are, this is the rule, full stop. It is not a democracy; it is simply not possible.
> When there is a conflict over a toy, many mentors have told us, "If you already know that this toy creates conflict, remove it, period". So, in past years, it has happened a lot that when it was tidy-up time, they all wanted to help with something in particular... but when you are helping to put things away, you are helping with everything, not just what you want. If the teacher told you this, you do that, not something else… For instance, I tell them, "Ok, you don't want to tide up that, just the ribbons; then, nobody does the ribbons... I'm going to take them away," and the ribbons didn't return today.

This instance demonstrates how, even though children are seen as good and innocent, they are nonetheless regarded as beings who must obey adult demands without inquiry. Children are not permitted to negotiate with adults, and rather than addressing issues, they should be avoided or eliminated.

The examples have shown that embedded in the image of the spiritual child there are several assumptions about who children are supposed to be and why, which include statements about how they learn and what should be taught or not. These ideas are connected to the ways in which EE is tackled at the Waldorf Preschool and the notion of living in harmony with the environment. Next, I present the dominant images and associated assumption found at the City Preschool.

8.2. The City Child: The Adult in Training and The Child as a Social Agent

At the City Preschool, I found two images of childhood. On the one hand, the child as an adult in training and on the other the child is a social agent. The image of the adult in training shows a strong parallel with the concept of learning outcomes promoted by the national curriculum which links to discourses of school readiness and learning outcomes. On the other hand, the image of the child as a social agent relates to the Regio Emilia approach which echoes human rights discourses and the notion of learning as a socio-cultural process.

I also found that the view of the child as a social agent was stronger among the head teacher, the pedagogue and the resident artist, while for the two teachers and the parents, the two images overlapped. Nevertheless, the dominant image was that of the adult in training.

I identified three main statements about children that link to the image of the adult in training these are: that children are knowledgeable, the idea of children as protagonists and that children learn best from real-life situations.

I also found two statements that match with the idea of the child as a social agent, these are: that children are capable people and that children can participate in and decide about situations that are important to them.

8.2.1. Children are knowledgeable people

A common statement about children at the City Preschool was that they are knowledgeable and that they are capable of understanding and learning new information quickly. Particularly, the teachers believed that children arrive at the preschool with knowledge that they have acquired from different life experiences or situations, which can be useful for future learning at the preschool. For instance, Lily explained:

> We really take into account the previous learning that children have about the topics or things that they live, to know where to start. Because children know many things, it may be things that they imagine or that they heard or that are real, either way, the point is that they know something about the subject. So, we start from there.

Seeing children as knowledgeable and capable of making sense of the world around them also appeared as an argument to teach them about the environment and environmental problems. For instance, Felicia said:

> They have all that it takes to understand and learn [about environmental problems] and if you also explain it to them from the play side or in terms of the different materials and all that, it is possible that they learn about it and that they see it as something important.

Similarly, Sabina said:

> It would be fine [to teach them about environmental problems], it would be very interesting because they already have this sort of…they are at a stage of their development and maturity where they can give you some ideas and solutions that you say, "It makes a lot of sense!"

It is interesting to note that Sabina sees children as mature enough to learn about complex topics, suggesting that age is not a barrier to doing so. Furthermore, she positions children as knowledgeable people she can learn from.

For Jasmin, recognising how much children know and their ability to learn quickly seemed more like a revelation than a presupposition. For example, Jasmin said:

> The children surprised me because when we returned from holidays...I thought they were going to forget what we had done [at the botany club]. Yes, it was a surprise for me to see that they did have a notion of everything we saw—the life of the plant, what is botany, the germination, and the life cycle of the plant—So, we said, "We are not doing too bad, the children do have an idea!"

Similarly, Azalea, when talking about the botany club said:

> I said, "Maybe children are just going to be interested in the seedlings and that's it". I thought, "No to they are too small". But when I approached and saw that, for example, the youngest children were talking about birdseed, germination and all that—because they made their plant heads—. I mean they were explaining that, and I saw that, yes! It actually made sense for them. We did have an impact somehow, right?

Some parents also referred to their children as knowledgeable, mostly in terms of environmental knowledge. Importantly, they positioned children as people who might be more knowledgeable than adults:

> Children are so smart, sometimes they know more than we do, in terms of environmental care, she even corrects me, and that's fine, she's the best.
>
> (Nadia, City Preschool)

Similarly, María, said:

> Children know more than we do. In fact, the other day we went to the village... I was burning the rubbish and she told me not to do it...I told her: But I have to burn it, and she says: no because the plants are nearby and

something about oxygen. I mean, she starts telling me so many things that I say, when did I teach her that? I didn't teach her that!

Echoing the idea that children know even more than adults Diana explained:

Before, I used to believe you had to teach children everything as if they were like blank books. But I don't see my son like that anymore, or children in general; I think they are at a much higher level than us… Sometimes you underestimate children and think that at this age they don't understand certain things, but I think that what they get to hear now, at some point they will get to understand 100%; what they get to grasp will be the base for certain concepts later.

In these examples, parents highlight that children can learn and transmit this knowledge to adults; they also recognise that children can learn from many different situations and people. Notably, children appear to be experts in the field when it comes to taking care of plants.

8.2.2. The child as a protagonist

Another common narrative that I identified among teachers was the view of the child as the protagonist, which connected with how teachers understand their role and how the dynamics that occur in the classroom have changed over time. For instance, Jasmin said:

Before, you were the protagonist because you took the child here and there and gave him the tools. Right now, with the new model [the new curriculum], it is the opposite. Who is the protagonist? The child. Who is going to do things? The child. You are only going to be the mediator, or the one who is going to guide him, so the child gets what he is intended to achieve. They are going to do it, obviously under your supervision, but to whom are we going to give priority? Well, to children.

It is important to note that Julia related what she had learned at City Preschool to the national curriculum; she also talked about how a different way of seeing children, implies a different way of interacting with them, highlighting the notion of changing old practices.

The view of children as protagonists of their own learning was also mentioned by Sabina, who, in addition, related it to the notion of freedom and the activities carried out outdoors as part of the botany club:

Something that children like is feeling free to touch things. That they become the protagonists of that experience. Many times, I tell you because, as a mom, I'm like, "Do not touch the mud; you are going to get your dress dirty". Many times, we deny children the opportunity to touch the soil, to be able to sow, and to know what is under the tree in the soil. So, the fact that they are given that permission to experiment is, I think, what they enjoy the most.

Sabina's example shows how, by adopting an approach in which children have more freedom to wander outdoors, power relationships are being unsettled and the transition from the role of the teacher who controls to the one who guides is starting to emerge. Nevertheless, in her account, the adult is still presented as the one who can allow or deny children the opportunity to be free or act as protagonists of their learning.

Furthermore, the idea of children as protagonists was also associated with a view of children as individuals who have to perform well. In that sense, there were many occasions on which children were involved in tokenistic practices. For instance, at the club presentations that took place quarterly, children were invited to speak in public and make little demonstrations to show the rest of the children and teachers what they had been learning at the club. Although this was an opportunity for children to communicate their ideas and take a more active role, the purpose of these activities was reduced to showing that the children and the teachers had met the objectives and deadlines of the project. Therefore, this was more of a form of public assessment that had many aspects that echoed managerial and meritocratic discourses, where the emphasis was on demonstrating efficiency. The following quote from the interview with Sabina exemplifies this situation:

There are expectations that one as a teacher has, "What if I do not know and if it goes wrong?" For example, for the club presentation, I was like, "How am I going to present my club?" I tried to anticipate things, but when one of the girls who was going to present didn't show up, I said, "Who is going to present her part?" "And what is going to happen?"
You project yourself and the expectations and start doubting if you are going to accomplish them or not. This has to do with oneself, as a teacher, I'm like that. Like, there are times when I panic and think, "What are we going to do today?" Although you have planned it already, sometimes it is like reality versus expectation, and it is not always the

same…The fact of really getting where you wanted is like, "Ay!" That's the most difficult part of being a teacher.

This example illustrates a managerial discourse that positions teachers as needing to demonstrate, through children, that what they have been doing is good and worthwhile, which could add pressure to an already stressful situation for teachers.

8.2.3. Children learn from real-life situations.

Another common statement was that children learn best through experience, including experiencing real-life problems. In this regard, Emilio, one of the parents, talked about the ways he believed children could be taught about the environment and environmental problems:

> As you would teach a child anything else, that is, knowing that he is a thinking and conscious person. We make the mistake of saying, "They are very small, and they do not know," when it really is not like that. They are people, and the more honest you are with them, the easier they will understand. There's no point in saying, "Look at the little teddy bear; it needs this and that." No! is more like, "Kids, we are going to work on this; this is this, and this is how it works, and it serves for this." In a healthy but direct and honest way so that they learn and know that they are both part of the problem and also part of the solution.

Here Emilio positions children at the same level as adults and appears to reject the view of children as naive. Importantly, he believes that children can and should learn about the environment and environmental problems and take a more active stance.

Echoing the idea or learning about environmental problems from real life examples, teacher Sabina, referred to a recent flood that caused the street where the school is to be filled with water and rubbish, said:

> I believe the best way for children to learn has always been through reality. Expose them to reality, to their experiences, that they get to feel, that they live and that they see, that they get to a conclusion and generate an idea, some knowledge, an experience...
> I would have liked to take them out yesterday so they could see how we are flooded because of rubbish. In fact, they asked me yesterday: "Why did we flood, teacher?"
> But they have not yet seen the sewers in the ground and how the rubbish blocks them. But it could be interesting, in the first instance, to explain:

"We were inundated because of this," so that they learn that rubbish should go in the bin. These are things that make you think: This could become a topic that is important because they could implement it at home or wherever they go.

It is important to note that the idea of learning from real-life situations means not only learning from first-hand experiences, but also learning about real and current situations. For instance, Vicente commented:

My daughter and I sometimes watch documentaries on TV, and she realises that there are places where children live surrounded by rubbish. There's a documentary on Netflix called Tales of Life or something like that; it's about some photographers that go to India or somewhere like that and show that children are living in rubbish, and she [Valentina] has seen that. So now she knows that it is better not to use straws or plastic.

These examples show children being able to make sense of the world around them, learn, and have a say about environmental problems. They elucidate a view of the child that, instead of being regarded as innocent and in need of shelter, is seen as a person who must be ready to understand and confront pressing social and environmental problems.

8.2.4. Children are competent people

Another common belief was that children are people with many capacities and potential whose views should be valued. This notion relates more to the view of the child as a social agent, which resonates with the principles of Regio Emilia. In this regard, Felicia explained the following:

We live in a society; we are social beings, and a child is a social being, and to develop this being, [the child] needs other peers around him and his environment. So, I see the child as another human being who needs the same support as us to live in this world because this world is no longer natural; the world has changed. Yet, I believe the child is a growing being, fully capable of inhabiting this world. In other words, if I don't transmit something to him, he will look for a way to satisfy that knowledge and get the stimulation that is necessary for him. Children can do it.

As seen, she stresses three relevant aspects. First, children are recognised as human beings. Second, they are placed as having similar characteristics and needs as adults and are therefore seen as capable, knowledgeable, and resourceful rather

than completely dependent on adults. Thirdly, the social aspect is highlighted as a definitive characteristic of the child, thus echoing the idea that children exist and are inevitably part of a society, and they need to interact with others, there is also awareness of the current social and natural context in which children live, highlighting the fact that the world has changed.

Similarly, Lily emphasised the interrelationship between children and adults, positioning both children and adults as capable of learning from each other, as seen here:

> A child is a unique being who has many capacities and potential and is eager to learn and express himself. He's curious, he's active, and he's a little person who can teach us what we've forgotten. Because it's not that we don't know; we've just forgotten.

In the above quote, Lily presents children as learners, willing to communicate, and having the potential to teach others and learn from others. A link to this idea is the discourse on children's rights. For example, Azalea said that a child is "a being full of potential who has rights". Furthermore, she related this idea to what happens in practice:

> Children should be recognised…When I say recognised, I mean to validate them when they speak, to listen to them, to be at the same level. Why? Because during teacher training before, we were always taught that the teacher should be writing on the blackboard and on your desk, and the child should be on the other side. So, when they [the teachers] come here and I present this part, theoretical, as you would call it, and they say, "Oh, that sounds nice," they are super motivated. But in practice, they have a hard time because it is not one but several children whom they must listen to, bend to, and be with.

This example elucidates how the image of the child as a right holder connects with the idea of dialogue, communication, and trying to lessen the power imbalance between the child and the teacher. Azalea's image of the child also elucidates a less authoritarian image of the teacher and thus a different way of teaching that seems to be associated with Reggio Emilia. Importantly, Azalea's account also sheds light on the struggles of putting this idea into practice, corroborating that this is not a common image at the preschool. She relates this lack of understanding to teachers'

training and the dominant transmissive approaches to education, but also to other factors such as child ratio, an issue that was mentioned by the teachers too.

Related to the changes in practice, Julia talked about her experience when she started working at the City Preschool:

> When we [the teachers] arrived, we realised that the way of working with children is different, and I was very surprised to see the classrooms when I arrived because, first, all the walls are white; there are no decorations as you usually see in other kindergartens, and here we have the assembly, which is where we sit on the floor. It is a space where children talk and express what they experienced the previous day. I've never seen that before.

Furthermore, Julia expanded on her learning journey exposing the challenges of having different versions of the national curriculum:

> I graduated with the 2004 curriculum, then the 2011 curriculum came out. When I was studying, we used to review the 2004 curriculum, and everything we planned and all the activities we had to do were based on that curriculum.
> In practise, I got to know the 2011 curriculum... I knew a little bit because we had to go to the courses, and through practise I started learning more, and when we had finally made sense of the 2011 curriculum, we got the new education model! [the 2017 national curriculum].
> At the beginning, we thought it [the 2017 national curriculum] was going to be something very difficult, but reading the programme, you realise that it is more focused on the way we work and the model we already have here. Because we work under the Reggio Emilia model, it is a different way of working with children, because normally what you would do with children in a public preschool is: you go to your classroom, you are sitting at your desk, you give your class, and the children are sitting at their tables and in their chairs, and that's it.

It is important to note how Julia referred to the Reggio Emilia pedagogy and the practical experience she had gained by working at the City Preschool as a way of overcoming the confusion that the constant changes to the curriculum had brought about. However, the fact that she compared the 2017 national curriculum with Reggio Emilia suggests that she is not entirely familiar with the new version of the curriculum.

8.2.5. Children can participate and decide

Another common idea at the City Preschool was that children can and should be able to take part in decision making and other activities at the preschool. This was understood mainly as allowing and encouraging children to express their opinions, questions, and experiences with their peers and teachers and to be consulted. For example, Lily said:

> Children now participate more. They can express themselves and say everything they have to say about what they are interested in, and here that is taken into account... Since they are very young, we do it that way. If you see the 3- and 4-year-olds, they already express what they want and show that they want to participate. At the same time, they have a hard time waiting for their turn, but that's because they want to express what they know...Let their ideas be heard.

Moreover, linked to these notions of participation is the importance given to dialogue and language at the City Preschool, which was also seen as crucial for negotiation and collaboration between children and adults. For instance, Azalea commented:

> Agreements are reached through dialogue. We say to the teachers, "Think, how are your children?" And from there, they start a dialogue with the children, and the teachers begin to immerse themselves, telling the children, "Well, how should we behave here? What materials are we going to need? And how are we going to work?" Then they begin to dialogue, and the teacher starts to mediate, and without realising it, they [the children and the teachers] begin to establish agreements. Children who already write can write them; the little ones can draw.

The idea of children's participation and decision-making was also linked to the curricular autonomy policy, particularly the point that stated children should be allowed to choose the club they wanted to attend. In this regard, Diana said:

> The children chose their club completely freely. Teachers taught them different topics, which they chose, and I thought that was really good.

The idea of letting children choose what they want stressed the narrative that letting children decide what they want is important and that their decisions should be respected. For instance, Emilio explained:

I don't know why my son chose to be in the botany club. How he decided that is really up to him… Really, he has some other more obvious interests, not so much plants, but I'm glad he did it, and since he is young, learning and discovering new things is always good.

Overall, teachers and parents seemed to be open to acknowledging the view of children as knowledgeable people who can come to their own conclusions and take decisions.

8.3. Chapter Summary

This chapter has presented the dominant ideas that circulate in each of the preschools by examining teachers and parents' narratives, which helps to answer the fifth sub-question of my research. Here I have shown that there are contrasting images, each of which is influenced by the different pedagogical models used at the preschools.

9. Discussion: The Influence of Images of Childhood and Pedagogical Models on EE

This chapter constitutes the main discussion of this thesis. Here, I bring together myriad interpretations and practices of EE approaches with dominant images of childhood in order to discuss how discourses about young children's education and development shape the way in which EE is understood and practised in two preschools in Mexico. The purpose of this discussion is not to measure or assess which preschool is more sustainable or successful in its endeavours but rather to describe how images of childhood associated with certain pedagogical models produce and reproduce ideas about young children, education and the environment, which then, in turn, impacts the ways EE is addressed and deployed in each of the preschools.

Perhaps the most striking finding is the substantial difference between the dominant images of the child and associated statements at each preschool, particularly in regard to ideas on teaching children about environmental problems—or not. To summarise, on the one hand, there is the Waldorf child, who is first and foremost a spiritual being and, thus, is inherently good. This child is supposed to be peaceful, free, playful, fit and creative but is nevertheless naïve. This child has a special connection with nature and the divine, having come to this world in order to fulfil a unique mission. The Waldorfian, spiritual child is best situated in close contact with nature and away from the modern world, marred by the hustle and bustle of business and other problems of the city. These children therefore should not and cannot worry, reflect or have a say—let alone consciousness—regarding the problems that affect them.

Even though this image values childhood and stresses the relevance of nature in everyday life by promoting healthy habits, it retains the stereotypical image of the mythic 'walled garden' of childhood, where children need to be protected from the social and cultural reality in which they live (Holt, 1974).

On the other hand, there is the city child who shows two contrasting images that nevertheless overlap. The image of the child as an adult-in-training is driven by discourses of investment–return. Therefore, children are to be equipped with all the necessary knowledge, information and skills to be ready for the next stage of

schooling and become a successful adult (Sorin, 2005). To do so, children must demonstrate that they have met certain predefined learning outcomes. Seen as knowledgeable and ready to absorb new information, these children start their formal training by learning concepts and facts about the environment, including environmental problems. In this task, teachers play an essential role and appear as leaders who demonstrate that the expected outcomes have been met in a timely and efficient manner. This image of the child acknowledges and values children's knowledge, skills and capacities, but the plan for this child, which is driven by discourses of attainment and competition, focuses on academic success and performance, while ignoring the creative, emotional and experiential aspects of EE.

Differently, the image of the child as social agent, not only sees children as knowledgeable and skilful, but it also recognises that children have different ways of learning and expressing what they know. Children are also seen as able to make sense of the world around them and as having their own interests and opinions. Learning is seen as a socio-cultural process where children construct ideas and conclusions with or without the help of others. In that sense, the child as agent can learn and share experiences or concerns about the environment through direct experience, dialogue and problem solving. Importantly, their voices are valued and respected.

The following diagram serves as a visual reference to map distinct images of childhood and EE approaches (see Figure 25). By mapping these images of childhood, pedagogical models and EE approaches, I seek to construct a mosaic of the ways in which images of childhood and pedagogical principles instil "discursive truths" that shape the ways in which EE in ECEC is understood and practised (Osgood, 2006, p. 7). The diagram is organised in two parts. The upper portion corresponds to the theory of images of childhood and is organised into four aspects: Aspects 1 and 2 refer to the three broad models of childhood that I have used to track the roots of three dominant images of childhood (the innocent child, the child as becoming and the agentic child); Aspect 3 summarises the main beliefs that emerge from each of these images; and Aspect 4 identifies the dominant social discourses that correlate to such statements of childhood. The lower part of the diagram connects each of these aspects with the key findings of the study, starting with the dominant image of the child found in each of the preschools.
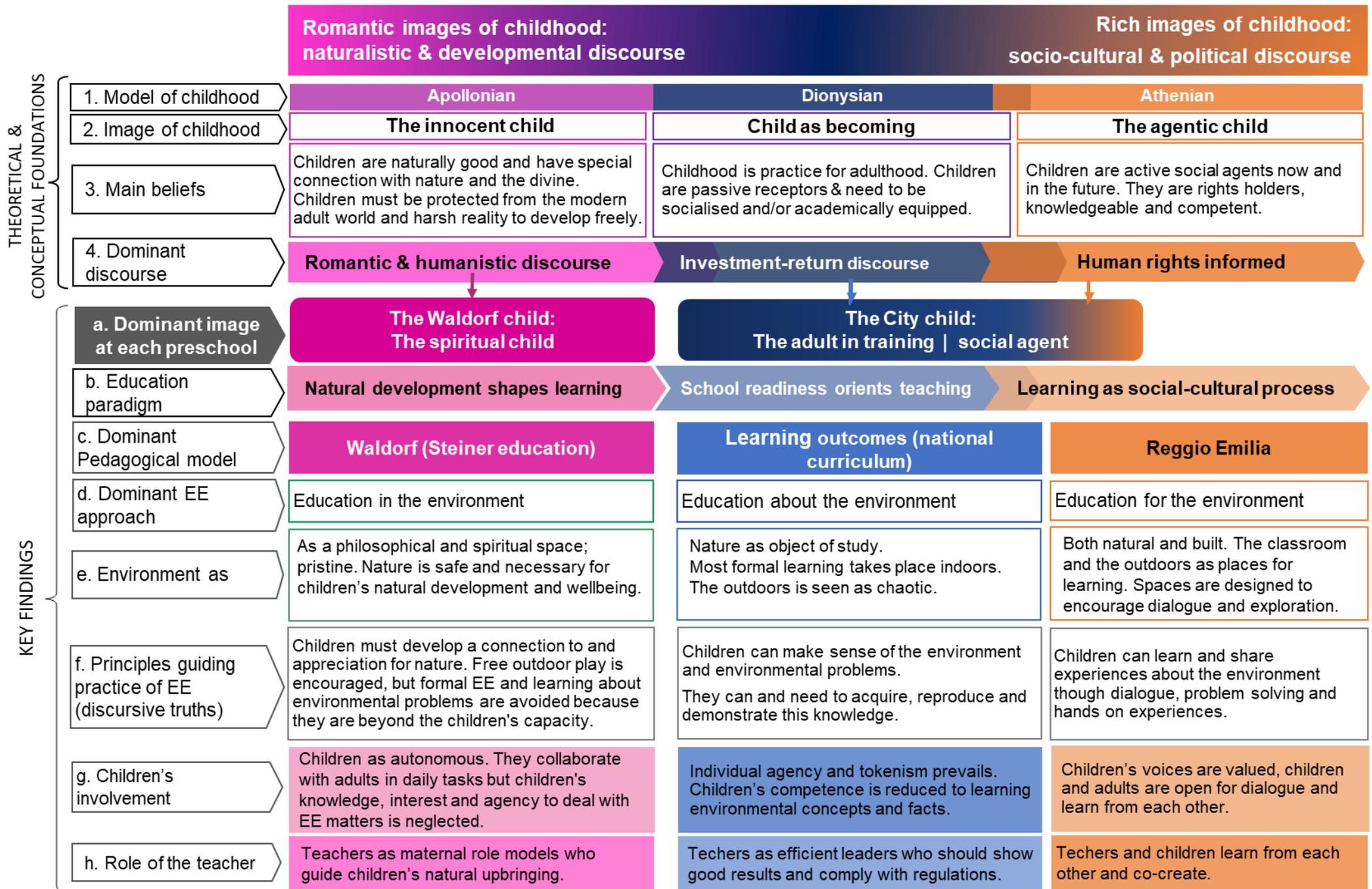
		Romantic images of childhood: naturalistic & developmental discourse		Rich images of childhood: socio-cultural & political discourse
THEORETICAL & CONCEPTUAL FOUNDATIONS	1. Model of childhood	Apollonian	Dionysian	Athenian
	2. Image of childhood	The innocent child	Child as becoming	The agentic child
	3. Main beliefs	Children are naturally good and have special connection with nature and the divine. Children must be protected from the modern adult world and harsh reality to develop freely.	Childhood is practice for adulthood. Children are passive receptors & need to be socialised and/or academically equipped.	Children are active social agents now and in the future. They are rights holders, knowledgeable and competent.
	4. Dominant discourse	Romantic & humanistic discourse	Investment-return discourse	Human rights informed
KEY FINDINGS	a. Dominant image at each preschool	The Waldorf child: The spiritual child	The City child: The adult in training | social agent	
	b. Education paradigm	Natural development shapes learning	School readiness orients teaching	Learning as social-cultural process
	c. Dominant Pedagogical model	Waldorf (Steiner education)	Learning outcomes (national curriculum)	Reggio Emilia
	d. Dominant EE approach	Education in the environment	Education about the environment	Education for the environment
	e. Environment as	As a philosophical and spiritual space; pristine. Nature is safe and necessary for children's natural development and wellbeing.	Nature as object of study. Most formal learning takes place indoors. The outdoors is seen as chaotic.	Both natural and built. The classroom and the outdoors as places for learning. Spaces are designed to encourage dialogue and exploration.
	f. Principles guiding practice of EE (discursive truths)	Children must develop a connection to and appreciation for nature. Free outdoor play is encouraged, but formal EE and learning about environmental problems are avoided because they are beyond the children's capacity.	Children can make sense of the environment and environmental problems. They can and need to acquire, reproduce and demonstrate this knowledge.	Children can learn and share experiences about the environment though dialogue, problem solving and hands on experiences.
	g. Children's involvement	Children as autonomous. They collaborate with adults in daily tasks but children's knowledge, interest and agency to deal with EE matters is neglected.	Individual agency and tokenism prevails. Children's competence is reduced to learning environmental concepts and facts.	Children's voices are valued, children and adults are open for dialogue and learn from each other.
	h. Role of the teacher	Teachers as maternal role models who guide children's natural upbringing.	Techers as efficient leaders who should show good results and comply with regulations.	Techers and children learn from each other and co-create.

Figure 25. Images of childhood, pedagogies and EE approaches

250

What follows in the rest of this chapter is a more detailed discussion organised in three sections. In the first section, I discuss the image of the 'spiritual child' at the Waldorf Preschool and address three specific topics: the notion of governing children through nature, issues around binary logic and aspects related to a purist view of the pedagogical model and the risk of dogmatism. In the second section, I discuss the image of the 'city child' and attend to three aspects: the dominance of narrow views of EE, the move from transmissive to experiential learning and the notion of the child as social agent. In the third section, I focus on the politics of EE by looking at the micro and macro level. Here I discuss points related to the importation of European educational frameworks, the legacy of colonialism and the impact it still has over the population, particularly indigenous groups. This last topic is a concern that I refer to, although it is not the central focus of my work.

9.1. The Spiritual Child

This study found that at the Waldorf Preschool the image of the child is strongly influenced by the Waldorf pedagogy as well as by teachers' and parents' reading(s) of anthroposophy. Overall, activities related to EE were grounded in the pedagogical principle of bonding with nature and teaching only what is good, beautiful and 'true'. These tasks exhibited a strong reliance on natural development and a reluctance to involve children in dialogue or critical thinking activities. This finding supports the work of other studies in this area linking romantic notions of children based on the narrative of the connection with nature to weak images of children as creatures who are detached from social and cultural realities (Duhn, 2006, 2012; Elliott & Davis, 2009; Elliott & Young, 2016; Samuelsson & Kaga, 2008). In particular, my study corroborates Elliott & Young's (2016) idea regarding the strong links that exist between a romantic view of childhood and the nature-by-default approach.

Moreover, the findings of my study are in line with Elliott & Davis' (2009) analysis indicating that two of the "resistances" to critical engagement with EE and sustainability in ECEC are the assumption that EE is only about bonding with nature as well as the belief that children are immature and unable to think for themselves or deal with complex knowledge.

Thus far, this study has also identified discourses about a natural childhood and bringing children closer to nature, the same which reproduce narratives of nature deficit disorder (Louv, 2005). This discourse appears to reinforce a view of preserving and protecting children from the dangers of urban civilization, which in turn results in dismissing important learning opportunities for children. It also ignores children's abilities, capacities and interests regarding environmental issues that go beyond the mere aesthetic or experiential domains.

Furthermore, my findings demonstrate that there is a strong parallel between the pedagogical principles and practices found at the Waldorf Preschool with Apollonian configurations of childhood. These echo Rousseau's ideas of negative education and discourses of natural upbringing and maternalism. This finding broadly supports the claim that romantic and idealistic notions of nature and childhood are still present in alternative and contemporary early childhood pedagogies and reiterates the need to scrutinise such views (Duhn, Malone & Tesar, 2017; Taylor, 2013).

Overall, my findings provide evidence that romantic and naturalised images of childhood, such as the spiritual child, seldom result in any meaningful recognition of children as social agents, while they simultaneously limit EE to education in nature. The findings of my study, therefore, differ from the work of other scholars (Boyd, 2018; Oldfield & Boyd, 2017) who champion Steiner's pedagogy as an example of critical approaches of EE.

Next, I discuss in detail five aspects that relate to the ways in which the image of the child as spiritual and the pedagogical principles derived from Steiner's ideas could limit the transition towards more critical views of EE.

9.1.1. Governing Children Through Nature: Natural Upbringing and Maternal Role Models

The findings have shown a marked tendency among children and parents to make children fit into the model of the spiritual child, which is to a great extent defined by critical 'natural' periods of development, in this case septenniums. Influenced by Steiner's ideas about human development and the premise that the first seven years of life are about developing the physical foundation of a healthy body (Schmitt-

Stegmann, 1997), the dominant belief is that during the early years, children are not capable of thinking or reflecting on any social or environmental problems, let alone discussing problems that are evident and are part of their everyday lives. Encouraging children to use their thinking mind and inviting them to take part in dialogues, discussions or reflexivity with their peers, and even more so with adults, is therefore seen as inappropriate. Since children are seen as irrational creatures detached from the problems that affect life on Earth, their possibility and right to have a say and act upon issues that affect them—such as pollution, injustice and deforestation, to name just some—is limited and even ignored. Such practices thus reproduce the notion of children as irrational and amoral beings, while it also positions critical thinking, participation and social agency as developmentally out of reach of young children.

In this case, the image of the spiritual child appears as a novel discourse to challenge the view of children as metaphorical vases that need to be filled with information. Similarly, the Waldorf pedagogy is portrayed as a different type of education and as a superior alternative to models of education as transmission, which are often associated with 'traditional' education and commonly linked with public education services in Mexico.

This observation may support the view that the image of the spiritual child as well as the idea of children's special connection to nature hold a particular view of nature as exerting a certain degree moral authority, which can prove problematic (Daston & Vidal, 2004). This is because nature becomes another way of universalising and standardising childhood, as it is used to predefine what is ethical, desirable and useful in a given context (Turk, 2021). Within this discourse, the idea of being natural is posited as synonymous with the self-evident, often collating habit and custom with a given natural order of things understood as obligation and purpose. In this way, the idea of a given natural order also serves to mask autonomy with obedience, an aspect that reflects the order of governing through freedom.

The combination of a natural order together with ideas around maternalism thus act as the technologies of the self, aimed at naturally shaping the lives of children (Rose, 1999). These mechanisms, however, are no less controlling for being implicit, as the

control is within the belief system about what is normal and good, rather than imposed overtly. Thus, the purpose is still to enclose childhood and children "into simple predetermined entities who are to be regulated, denying their human complexities and ambiguities, and their right to be heard and respected as equal human beings" (Cannella, 1997, p. 158).

The prototypical image of the child as a magical being arriving in this world calls for nurture and protection, supposing that children should have the freedom to be and develop naturally. Yet, this freedom often translates into the shielding of children from what is considered the adult world and adult problems. This perspective on childhood is influenced by the ideal of a happy, sheltered childhood and a natural environment that is presented as 'neutral' and untouched. Teachers at the Waldorf Preschool were keen to re-create a more familiar place for children as the ideal and expected elements to ensure a good childhood, thereby evoking discourses of maternity and natural development (Ailwood, 2008; Taylor, 2013). This idea shows a strong parallel with Rousseau's belief that women are naturally more suitable to educate the young child, which is ultimately rooted in the notion of natural order (Rousseau, 2006/1776). The teacher, in the role of caring mother, becomes a key component that complements the picture of ECEC as a place for care and natural upbringing at the Waldorf Preschool. This narrative then serves to sustain the belief that young children are better protected in and by nature and that teachers should be exemplar maternal figures who nurture children's natural upbringings, an idea that could reproduce gender stereotypes in the field.

Thus far the image of the spiritual child not only presents an idealised view of children, but it also works to shape the role and the identity of teachers as well as parents. Moreover, the image of the child appears to impact the characteristics of the physical space. This is evident through the metaphor of the classroom and the uterus associated with maternal feelings as well as the idea of protection and warmness; this, together with the picture of the Sistine Madonna inside the classroom, functions to create the "archetypal heavenly mother and heavenly child" (Poer, 2008, p. 15). This is commonplace within the Waldorf pedagogy and reflects the importance that feminine care and tenderness have for the construction of the Waldorf child. These observations show the strong influence that the image of the

spiritual child and the pedagogical principles have at the level of discourse, practice and space—but most pointedly at the level of personal beliefs. This observation also suggests that the commitment to the pedagogy and extent to which the image of the child drives practices may be closely linked to ideological principles that act at the level of the construction of the self.

9.1.2. Binary Logic and The Separation of Child and Adult Worlds

Although the spiritual child is positioned to some extent as superior to adults and in closer connection with the cosmos and the divine, it still reproduces the discourse of children as objects of protection rather than human beings and social agents with rights (Duhn, 2012; Davis, 2014; Elliott & Davis, 2009). The idea of children as not developmentally ready or immature reproduces messages in which children are supposed to do and be, but not to think, which suggest the dominance of a binary logic. In this dualistic reasoning, thinking is associated mainly with rationality and the mind, whereas experience is linked to the physical body and sensations, but these are presented as disconnected and incompatible activities (Haraway, 2016; Prout, 2005; Taylor, 2015).

This same binary logic also conveys a separation between the social and the natural realms—and, ultimately, an equally dichotomous separation between the so-called child and adult worlds. The detachment of children's worlds from those of adults relegates young children to being part of nature until they are appropriately socialised (Prout, 2005). This distinction implies that children must be detached from the social and cultural world as if children were "pre-social or asocial" beings (Taylor, 2013, p. 13).

These assumptions are again rooted in romantic constructions of childhood, particularly Steiner's notion of septennials, where the focus is on the development of the physical body and motor skills during early childhood and the avoidance of 'conscious education', two premises which resonate notably with Rousseau's notion of negative education.

The consequence of maintaining this view of young children (i.e., as naturally irrational) is that activities planned for children emphasise experiences in nature to

develop their fine and gross motor skills, which is without doubt important. However, this also means that many opportunities for children to express their opinions, reflect and interact with their teachers and peers, whether verbally or by other means, is truncated—particularly when these relate to environmental problems.

The lack of connection between thinking and action, which is one of the main characteristics of the spiritual child, is debateable and exposes many loose ends in practice. For instance, when children were allowed and indeed expected to go on walks to pick up rubbish, they were still portrayed as unable to understand and have a say regarding the ostensible problem to which they were being directly exposed.

Given the premise that young children cannot yet think and instead need to be reconnected with nature (with minimal intervention from adults), it then follows that practises related to the expression of ideas, decision-making, democracy and dialogue, especially between adults and children, are of little importance and end up being ignored. Such an understanding of childhood and education stand in stark contrast with the pedagogical principles of critical EE approaches, which recognise and call for active and critical learners rather than merely passive, good and, albeit 'beautiful' children.

In practical terms this could also mean that by seeing children as magical and innocent beings that need to be sheltered from the adult world, teachers and parents "displace children not only to a separate child's world, but also to a world without participating adults" (Singer, 1996, p. 32). Such a relegation would inevitably result in forfeiting important opportunities to take children seriously and work *with* them instead of merely for them.

9.1.3. Purism and the Risk of Dogmatism

The overreliance on Waldorf pedagogy suggests the dominance of a purist vision of Waldorf education which corroborates the ideas of an increasing uncritical reproduction of Steiner principles (Rawson, 2010; Woods & Woods, 2006). This tendency contributes to adopting a dogmatic stance that results in simplification and standardisation of pedagogical practice (Sagarin, 2003). Moreover, another one of the effects of adopting a purist posture is that the overreliance on Steiner's ideas and

the Waldorf pedagogy could "collapse real existing children into theories" (Alderson, 2016, p. 203). In this case, the spiritual child becomes the cannon, or the one-size-fits-all for children, which teachers and parents should also entrust. Such a pedagogy reinforces the belief that children are not interested in the problems that affect them and cannot understand them. Consequently, adults are better off limiting their interactions with children and avoiding dialogue and reflection altogether when it comes to environmental issues—as well as other complex topics. However, looking at the responses of children from the City Preschool, this is clearly not the case.

The ways in which teachers and parents use pedagogical principles to justify their beliefs about childhood elucidate certain power dynamics and the will to truth that "legitimise practices to such a degree that other ways of thinking and doing become not only un-acceptable, but also un-imaginable" (Duhn, p.21, 2006). Among the teachers and parents there was an implicit assumption that the more they followed Steiner's ideas and adhered to the Waldorf model, the better the children's education and upbringing would be. This was evident through phrases such as "It's because of the pedagogy" and "The pedagogy says so". It also came through as different school stakeholders positioned themselves as '*being* Waldorf'.

Teachers' and parents' reluctance to view children as competent, knowledgeable social agents may stem from a desire to defend the pedagogy by preserving the image of the spiritual child, which is emblematic of the Waldorf ethos and community. In this sense, drawing from ideas of Duhn (2006), I argue that this image is constructed and "exist[s] in stark contrast to the knowing, technology-savvy child of postmodernity", who appears as "an invader and a threat to ideal childhood", where "the good child is innocent and the bad child is knowing and thus a risk to ideal childhood" (p. 17). It can therefore be assumed that such reasoning together with contemporary "concerns about the increasing objectification of nature, and the diminishment of children's subjective experience of it" represent the underlying discursive truth that justifies seeing EE strictly as EE in the environment—and thus reducing it to nothing more than bonding with nature (Taylor, 2013, p. 47).

These practices are validated and gain force in this context because they appear as an alternative regime of truth that reproduces discourses of freedom and exclusivity.

'*Being* Waldorf' therefore evokes narratives around being different and authentic, of possessing a different type of knowledge and of comprehending a different truth or having access to a pristine environment in which children can be in direct contact with nature. These aspects suggest a connection with other dominant social and economic circumstances. For instance, families with children enrolled in this preschool are among the small, privileged sector of the population who can afford to pay its high fees and who have the time and economic solvency to drive their children to a secluded place in the jungle.

The discourse of an alternative and authentic childhood seems to be, paradoxically, embedded in the assumption that there is only one natural and idyllic way of developing or of being a good child, and this is an option—in concrete, practical terms—only available for a select few. In this sense, my analysis coincides with Wilson (2022) in that Waldorf pedagogy, despite being labelled as an alternative pedagogy, still maintains dominant views of childhood based on the idea of universal stages of development and that, furthermore, it reifies the dominant discourses of white middle-class child-centred philosophies of the west, which may very well themselves contribute to the reproduction of systemic and deep-rooted inequalities.

Having thoroughly discussed the circumstances of the Waldorf Preschool, I now move on to discuss the images of the child at the City Preschool in the following section.

9.2. The City Child

At the City Preschool there were two different images of childhood: the adult-in-training and the child as social agent. The image of the adult-in-training and the National Curriculum were two dominant discourses that influenced practice to a great extent, particularly aspects related to education about the environment. Meanwhile, the child as social agent is associated with the Reggio Emilia curriculum and shows some parallels with education for the environment approaches.

Although these two images overlapped, the dominant one was that of the adult-in-training, which links to the model of 'children as becomings' and a view of EE as education about the environment. However, despite the dominance of this image, the

view of the child as a social agent suggests the emergence of an alternative discourse which seems to offer a possibility of transition towards more critical EE approaches.

9.2.1. The Dominance of Narrow Views of EE

The predominance of lecture-like activities at the initial stage of the botany club shows the influence of discourses centred on school readiness and the prevalence of transmissive approaches of education, which connect to narrow views of EE as education about the environment.

Moreover, the tendency to view the environment as nature-only, along with the interpretation of EE as taking care of the natural world, echoes conceptions of the environment included in the 2004, 2011 and 2017 preschool curricula. This suggests that the narrow view of EE might be connected to the way in which EE is presented in the national curriculum.

Furthermore, these findings are consistent with the profile of EE in Mexico I described in chapter three, showing that EE at the preschool level is greatly influenced by a positivistic view of EE associated with the natural sciences and transmissive models of education. Indeed, these have been dominant within the formal education system in Mexico for some time. In this sense, my findings broadly support the work of Chamizo (1990) and Terron-Amigon (2019).

It is also important to note that the emphasis on EE as learning facts about the environment only and seeing knowledge as a means to promote pro-environmental behaviour also resonates with the results of other studies outside Mexico (Davis, 2009; Green, 2015; Hedefalk et al., 2015; Somerville & Williams, 2015).

Imposed Autonomy

Other ideas contributing to the maintenance of a narrow approach to EE as an extracurricular activity are those of autonomy and choice. This discourse was evident throughout the curricular autonomy proposal that triggered the formation of the botany club. Through this newly introduced policy, teachers were expected to have more freedom to choose the topics that are relevant for the children and the school

and, likewise, to get involved in a more collective process of decision-making and planning. Paradoxically, the freedom to decide was given by a regulation that is mandatory.

This example serves to elucidate how the educational system has the power to enforce new practices and, most importantly, how these top-down measures employ the strategy of governing through freedom, where the idea of autonomy is embedded in discourses of "self-actualization through choice" (Rose, 1999, p. 165). Moreover, this discourse of autonomy as freedom of choice was also reproduced at the micro-level with children, who were expected to decide which club they wished to attend.

Linked to this discourse is the narrative of self-responsibility, which has implications for the scope and possibilities of EE because it ends up framing and justifying EE and associated practices as optional rather than as urgent and necessary for all. This view of EE as a choice based on individual preferences ignores the pressing nature of the social, cultural and economic aspects at play when addressing EE. Ultimately, it exposes other key aspects that might contribute to the maintenance of narrow views of EE, one of these being the lack of teacher training, discussed next.

The findings of the study showed that teachers did not have adequate knowledge about EE, while sustainability was practically an unknown and ambiguous term for them. This came into yet sharper relief upon review of the responses from parents, who seemed to be more familiar with the terms and even went so far as to give examples of how they apply some principles of sustainability in practice. This further highlights the fact that teachers are expected to teach and plan activities that require a high level of knowledge and experience without receiving any additional support from the preschool or other responsible educational authorities.

These findings, therefore, show that, similar to what Marcos-Iga and Markowitz (2005) explain, teachers may not participate in environmental education activities as much as they would like because they are already overworked, attempting to achieve all the standards in traditional domains of knowledge, such as numeracy and literacy, which still occupy a central part of the national curriculum.

On the one hand, these findings confirm the currency of historical and political debates in the country around the terms EE and sustainability, corroborating the

claims of other Mexican scholars regarding the rejection of the term sustainability (Barraza, 2003; González-Gaudiano, 2003, 2006). On the other hand, the fact that parents seemed to be more acquainted with the term sustainability than the teachers suggests that within the field of ECEC, EE and sustainability remain disconnected concepts. This aspect invites reflection on how these two terms might intersect and interact, while it also suggests that parents could be key in starting a process of collaborative learning that links the preschool with the broader community in order to bring these two perspectives to the table.

9.2.2. From Transmissive to Experiential Learning

The findings of the study showed that, in practice, the notion of taking care of the place where we live went from lectures about plants to more experiential and hands-on activities. Another aspect that allows for observation of how these two learning strategies fluctuate in practice is the use of the classroom and the outdoors. One interesting finding is that, in practice, spending time outside at first represented a challenge for teachers, who were not used to conducting their class outdoors. Elliott and Davis (2009) argue that preschool teachers tend to avoid spending time outdoors because they hold the misconception that formal learning can occur exclusively inside the (indoor) classroom. However, it is possible that the reluctance to spend more time outdoors is also related to feelings of anxiety about losing control of the group and, therefore, not meeting the pre-determined objectives planned the session. This event could be connected to the influence of managerial and investment-return discourses in education, which stress the importance of results and outcomes as measures of productivity, efficiency and performativity (Ball, 2003).

Nevertheless, despite the initial resistance to spending time outdoors, teachers still tried to do so. These decisions appear to be quite conscientious ones, linked to the belief that children should be given the opportunity to experience the outdoors. This same idea also connects with the belief that children should assume the role of protagonist more often, thereby positioning teachers as not having to be in full control of the situation all the time.

These contrasting views of the outdoors and ways of perceiving children appear to be linked to the differences that exist between the two pedagogies or educational approaches informing practice at the City Preschool. On the one hand, there is the National Curriculum, which is based on the idea of predefined outcomes, careful planning and consistent results. On the other hand, the influence of the Reggio Emilia approach competes with the former by advocating for the idea of being comfortable with the unknown, redefining roles and the notion of the environment as a second teacher (Malaguzzi, 1993).

9.2.3. Making Room for the Child as a Social Agent

The image of the child as an agent of change is commonly associated with children's rights, as promoted by the Reggio Emilia approach (Malaguzzi, 1993; Moss, 2000). At the City Preschool, this image of the child as a social agent was slowly gaining traction in subtle ways, but it was still not the dominant one. To some extent, this was expected, as the headteacher made clear that, although the preschool was initially inspired by the Reggio Emilia approach, there had not been any formal training in the same for its teachers. In this sense, the National Curriculum tended to provide the main curricular guidelines for the school.

Even when the rich image of the child as social agent was not the dominant one, it did impact pedagogical practices to some extent. The aspects in which the Reggio Emilia approach became most evident were reusing and upcycling practices, the physical space and the emphasis on recognising children's potential and valuing their voices. Likewise, the overall structure and organisation of the preschool and its staff—i.e., having a multidisciplinary staff that includes a pedagogue, a resident artist, teachers and assistant teachers, among others—can be attributed to the Reggio Emilia approach. Indeed, this structure is uncommon in most Mexican preschools (particularly the presence of assistant teachers or a resident artist).

It is quite possible that these aspects have contributed to shape the way children at the school make sense of the environment and environmental problems, a topic which I discuss next.

Children taking care of other living beings

Contrary to dominant views of children as innocent and irrational, many children in this study showed that they are aware of the world around them and the problems that affect it. Many of the children in this study made it clear that they want to learn more about the environment and environmental problems and that they are also willing to be part of the solution. It was evident that children not only acquire but also construct and share ideas regarding the environment from an early age. These findings are in line with those of previous studies conducted with primary school children in Mexico (Barraza, 1996, 2001; Barraza & Cuarón, 2004) as well as with preschool-aged children internationally (Engdahl & Rabušicová, 2010; Kahn & Friedman,1995; Palmer, 1998).

This study also documented the fact that the botany club had a significant impact on children's perceptions of the environment, environmental care and environmental problems. However, my findings also suggest that children's environmental learning is not limited to what they are taught in formal lessons. Children start navigating and making sense of environmental messages and associated terms through a variety of sources, including social media, videos, movies, stories, chats with their teachers and situations that they experience at home. To do so, children used various skills and types of knowledge, including conceptual as well as experiential knowledge and metaphors. These are topics which would likely benefit from additional research to better understand the role that knowledge and communication strategies have within the process of making sense of the environment and environmental problems among young children.

Emotions and developing a sense of empathy also played central roles in children's discourses around protecting other living beings, an aspect that could be associated with the connection to nature discourse and the work of authors such as Chawla (2007, 2020).

These findings demonstrate children's extraordinary ability to learn fast and apply what they learn to real life situations suggesting that when environmental knowledge is combined with an understanding of other livings being, empathy, emotional attachment and narratives of justice and responsibility as well as the opportunity to

express how they feel or think there is a possibility of moving towards more action-oriented type of EE in which children can start to exercise their agency.

Moreover, children's accounts of the different ways they encounter various and even opposing environmental massages, as well as their experiences with these, show that they are capable of forming their own opinions, taking a stance and challenging other ideas or situations—even when this implies contradicting adults. Herein lies the agency and activism of which I argue children are capable. This finding broadly supports the work of several scholars in the field of ECEfS, that recognises and advocates for participation rights and a view of children as competent social agents (Borg & Pramling Samuelsson, 2022; Caiman & Lundegård, 2014; Davis, 2008, 2014; Davis et al., 2008; Elliott & Young, 2016; Hägglund & Johansson, 2014; Hägglund & Pramling Samuelsson, 2009; von Braun, 2017).

Finally, the findings of my study show that perceiving plants as living and sentient beings prompted particular narratives around empathy, fairness, respect and responsibility towards other forms of life. Children's recognition of plants as living beings that are born, grow and can die appeared to be the basis of their argument for environmental protection. These observations not only stress the remarkable knowledge children have about plants but also highlight the relevance that plants might have in the formation of discourses of care and sustainability among young children. Aspects related specifically to children's knowledge and relationship with plants fall out of the scope of this research; however, it signals an interesting and necessary area of study that needs to be further explored. Nevertheless, it is worth noting that the findings of my study are consistent with previous research indicating that young children are not only able to accurately distinguish between living and non-living forms, but they can also demonstrate a more complex understanding of plants as living beings than was previously believed (Margett & Witherington, 2011). Other studies also corroborate this idea (Ergazaki & Andriotou, 2010; Palmer and Suggate, 2004).

9.3. The politics of EE in Mexican preschools

Instead of looking at preschool level or the ECEC arena as neutral or depoliticised, the feminist poststructuralist approach that frames this study recognises that the child-adult relationship and the everyday lives of children in a society are necessarily political (Duhn, 2006; Mayall, 2000). Rather than viewing EE at the preschool level as a simple matter of determining which theory or pedagogical approach is more natural or developmentally appropriate, let alone more effective, I relied on the concept of governmentality and used both thematic analysis and critical discourse analysis to examine how images of childhood frame understandings and practices of EE in two Mexican preschools. This study has thus focused on the analysis of the power relationships that occur in a given social, cultural and political context, in this case between adults and children/childhoods in two Mexican preschools.

The literature on governmentality highlights the significance of political rationality, specifically in the context of neoliberalism, wherein political power operates both, via direct state interventions as well as through the growing influence of self-governance among individuals (Dean, 1999; Duhn, 2006; Foucault, 1977, 1982; Rose, 1999; Smith, K., 2014). As I explained in Section 2.4, images of childhood are understood here as a set of claims about how children are supposed to be. These images, seen as dominant discourses of childhood, are thus embedded in power dynamics, ideologies, as well as cultural and historical contexts that shape not only how one thinks about childhood but also how one acts in, for, or around children, and ultimately how children are governed. In that sense, what it means to be a child and what EE at the preschool level should look like is the product of a set of claims and assumptions about childhood, which are at the same time linked to beliefs, knowledge, values, norms and conceptions of nature, the environment, education and sustainability.

The politics that take place at Mexican preschools are multidimensional and go from the micro-politics of the everyday, which are expressed in the routines, activities and didactics of the preschool, to the macro-politics at the level of the state through policies and the national curricula. At the micro level, the different ways of referring to and acting around, for, or with children denote the influence of particular images of

childhood. For instance, allowing, letting, or affording children to be listened to and express their ideas or not about environmental problems represents a political stance that might, depending on the context, resist the norm or status quo or reproduce it. In that sense, following feminist poststructuralist theories, I argue that the underlying principle for listening or allowing others to listen to or not to children's views is both epistemological and political (Smith, K., 2014).

Being able to listen to children at the City preschool suggests that young children are, to some extent, allowed and getting used to expressing their opinions, worries, and disagreements, even when these might contradict those of adults. In a context in which violence against women and macho culture are still dominant, these voices, particularly those of girls, matter. This window of possibility takes relevance because, as expressed earlier, "[I]n order to have a social effect, a discourse must at least be in circulation" (Weedon, 1987, p. 110). Children positioning themselves against environmental damage by using their knowledge, voices and skills are thus ways in which they resist and transgress the status quo within the preschool and activate an alternative discourse. This suggests that when children are recognised as people with the capacity to learn and participate, when they are given the opportunity to express their opinion or teach others, the preschool could become a space for dialogue in which socio-environmental problems, rather than being ignored or aestheticised, are (at least) expressed and listened to. This is not to say that the dominant image of the child as innocent or becoming has been displaced, but rather that the possibility of an alternative discourse or image of childhood at the preschool level is in circulation. In the following section, I move on to discuss other aspects that link with the politics of preschools at the macro level.

9.3.1. European pedagogical models and colonial legacy

This study concentrated on two preschools that used two European pedagogical approaches—Waldorf and Regio Emilia—that, while uncommon in Mexico, are well-known in the ECEC sector and frequently promoted as effective alternatives to address EE at the preschool level. It should be noted, as explained earlier in Section 4.9, that these two cases are not representative of the general population and instead pertain to a very small and privileged segment. Although the selected cases

may not be fully representative, they do offer insight into the diverse social and economic contexts prevalent in the country, as well as the various educational approaches and interpretations of EE. Importantly, they expose the dominance of imported European educational models and the legacy of colonialism.

The study of colonial legacy is complex and multifaceted "because it is not only about soldiers and cannons but also about ideas, about forms, about images and imaginings" (Said, 1993). The subsequent section of this chapter centres on the discussion of topics derived from the critical analysis of how images of childhood— echoed by contemporary European pedagogical models—reproduce colonialist discourses that shape EE at preschool level in the current neoliberal era. This then serves to shed light on how neocolonial discourses structure and undermine pedagogical principles and practices in the field of ECEC. As Pacini-Ketchabaw & Taylor (2015, p. 2) maintain:

> in settler colonial societies [like Mexico], the seemingly unremarkable, everyday business-as-usual of early childhood education remains inadvertently (albeit often unknowingly) entangled in the social and ecological legacies of colonialism.

A further analysis at the macropolitical and historical level exposes other issues around neo-colonialism. As shown, the two cases were guided to a different extent by two Western pedagogical models that are regarded as alternative approaches by the preschool staff and parents themselves. Framed as alternative pedagogies, these models were also championed as better and more 'eco' options in comparison to public preschools, which are commonly associated with traditional schooling and SEP regulations.

Interestingly, however, the authors and pedagogical principles associated with these two alternative pedagogies (Waldorf and Reggio Emilia) are not alien to the curricula produced and distributed by SEP or state authorities in the past. For example, as reviewed in Section 3.5, Rousseau and Froebel were key referents for the first preschool guidelines in the country, whereas Malaguzzi's ideas, along with those of other authors such as Dewey, were also used as the theoretical basis for the 1992 preschool curriculum.

Drawing on new writing about critical postcolonial studies and post-human approaches (Pacini-Ketchabaw & Taylor, 2015), I argue that the attempts to use western models of education to fix the country's social, economic, and political problems are not new or unusual in Latin America but rather a repeat of the colonial past of the region. The idea that what is imported is somehow better or more advanced is a common dominant discourse in Mexican society, which links to other problems around privileges, discrimination, inequalities, injustices and the public/private divide that are systematically embedded in quotidian practices, inside and outside the formal education system.

My study has exposed how Western ideologies have travelled through pedagogical models, producing and reproducing images and practices that disregard to a great extent the culture and history that have inhabited Mexico for centuries. Moreover, these ideologies appear to influence the way spaces and places are used, thus giving the natural and built environment particular connotations. On the one hand, managerial and economically driven discourses based on the idea of progress and civilization, such as the ones identified at the City preschool mainly among parents, frame urban development, economic expansion and modernisation as an inevitably and necessary path for the progress of a society. Thus, vindicating the marketization and neoliberalisation of nature (Castree, 2008; Mansfield, 2004; McCarthy & Prudham, 2004) and the concept of sustainability as a business-like model based on international quality standards and checklists that bears no relation to education, environmental care, justice or sociopolitical movements and activism that have been an important characteristic of the development of EE in the country (see Section 3.4.2).

The fact that preschool teachers were not familiar with sustainability while parents were could thus be linked to the ways in which the discourse of sustainability has entered the public sphere as something that occurs in the periphery, outside of the preschool and the education arena. In other words, a matter that falls outside the remit of a preschool teacher.

On the other hand, the romantic discourses of nature and the value given to it in function of its spiritual and aesthetic dimensions construct an idealised and idyllic

imaginary of natural spaces that tend to present a "pristine unpeopled nature" (Taylor, 2013). These views not only perpetuate the nature culture divide but also ignore, by means of romanticising, the cultural and historical past of the country and its original people.

Something important to note is that, as in other colonised nations, indigenous communities in Mexico have been systematically marginalised, dispossessed of their lands, and disavowed. These practices are still common yet are often masked under narratives of progress and/or salvation that are also a product of neo-colonialist discourses. As Braun (2002) explains, these profoundly idealised narratives about untamed natural environments enable individuals in positions of privilege to present themselves as the legitimate custodians of the land they purchase and now own, thus reproducing, perhaps inadvertently but systematically, a position of entitlement and superiority over most of the population who have been disposed of their land or cannot afford to buy and maintain it.

These imaginaries, as Taylor asserts, are rooted in romantic Euro-Western discourses of childhood that can also be linked to neo-colonial discourses and a binary logic typical of humanistic thinking. As Taylor (2013. p.62) explains:

> the Romantic idealization of nature, and hence childhood, depends upon the binary logic of the nature/culture divide. For nature and childhood can only be idealized through being separated off, valorized as exotic others, and counterposed or set against degenerative (adult) society. Along with the transfer of cultural understandings about nature and childhood into real life experience, this has the unfortunate flow-on effect of denying real children's real world relationships and it positions them in the paradoxical situation of needing protection from the world in which they actually reside.

To overcome this dualistic logic and recognise the value of nature and places without romanticising them, Taylor (2013), inspired by the work of Donna Haraway, introduces the idea of imperfect common worlds. This notion offers the possibility to move towards more critical EE approaches by reconfiguring the understandings of childhood and ECEC:

Common worlds, are not sanctified, pure and innocent separated worlds, but worlds that are always already full of inherited messy connections…worlds full of entangled and uneven historical and geographical relations, political tensions, ethical dilemmas and unending possibilities (Taylor, 2013. p.62).

The transition towards more critical EE approaches requires decolonising childhood discourses by challenging taken for granted narratives of childhood, including dominant developmental theories and child-centred approaches. This task also necessitates reclaiming the political and social-pedagogical dimensions of ECEC. The transformation of discourses and curricula should therefore go beyond adding components to the curriculum, enforcing policies or escaping the system and instead critically look at the deeper mechanisms that generate and perpetuate weak discourses of childhood and limited understandings of the complex interrelations of children and adults, humans and the more-than-humans, history, places and spaces we inhabit. The possibility of change also involves bringing together different disciplines, sectors and actors as well as critically discussing the past and present of the country, including the recurrent and systematic injustices that have marked the history of Mexico politically, economically and culturally, affecting mostly indigenous people, women, and children.

The examination of the intricate legacy and profound impact of colonialism, particularly on indigenous populations, although it is extremely relevant, lies beyond the scope of this thesis. To avoid oversimplifying or superficially addressing this topic, I acknowledge this is a post-thesis learning theme that requires a careful and deep review of social, cultural and historical dimensions, including, for example, the social protests led by indigenous groups, as well as the analysis of what it means to be indigenous in Mexico and how this relates to key concepts such as *mestizo* and *mestizaje*, along with a deeper examination of the notions of identity, collective agency and place, and most importantly, the involvement of indigenous people and communities. In the next and final chapter, I present the conclusions of this thesis.

10.   Conclusion

In this last chapter I review the key arguments and findings of the study and draw some final reflections. Next, I move to explain the main contributions of this research to the field of ECEC and finally I give some suggestions for future research.

10.1.Review of Key Findings and Final Reflections

This study examined how images of childhood and associated pedagogical models impact the way EE is understood and practised in two Mexican preschools. This thesis is framed by a feminist poststructuralist approach, sociology of childhood and discourse analysis and draws on the notions of environmental education approaches, images of childhood and pedagogical models to perform a critical analysis of EE in two Mexican preschools with contrasting pedagogical models. A qualitative study comprised of two exploratory case studies constituted the research design. One was an independent Waldorf preschool, while the other was a semi-private preschool influenced by both the Mexican National Curriculum and the Reggio Emilia approach. The focus of the research was on analysing how images of childhood act as mechanisms that can enable or hinder the transition toward more critical views of EE in ECEC.

In chapter two I described three EE approaches (about, in, and for the environment) and argued that education in and about the environment have theoretical underpinnings, learning styles, and conceptions of the environment and education that make them limited and less critical, leading to perspectives that can be considered narrow. Moreover, I made the point that a key component of critical EE approaches is that these recognise and include children as social agents, as active learners, critical thinkers and participants. This means that critical EE approaches necessitate pedagogies that respond to children's interests and concerns and that provide children with rich opportunities to learn, by fostering the importance of participation, coexistence with other living beings while also considering the relevance of environmental knowledge, hands on experience and problematisation (Davis, 2014; Hägglund Johansson, 2014; Taylor, 2013; Taylor & Giugni, 2012).

I also presented three broad configurations of childhood (Apollonian,Dionysian, and Athenian) which were used to identify contrasting ways of defining and governing childhood. These three configurations served to track the roots of three dominant images of childhood: the innocent child, the child as becoming and the child as social agent, which I linked with the three EE approaches: in, about and for.

In chapter three I offered an overview of the main characteristics of Mexico in order to situate my study. Here I showed that littering and deforestation are two of the main environmental problems in the region. Likewise, I presented a profile of EE and a historical account of preschool curricula to illustrate the different pedagogical models and the ways in which EE has been addressed throughout the different curricula. This analysis made it clear that EE in the formal education system is dependent on political agendas, resulting in frequent changes to the curriculum and pedagogical models that create a lack of continuity and confusion about not only EE but of the purpose of ECEC in general.

Chapter four detailed the methodology of the study and addressed the limitations, one of them being the impossibility of conducting interviews with children at the Waldorf preschool. Reflecting on the research process, this limitation offers insights about the ways in which images of childhood operate at the practical level by restricting access to children and reducing their possibilities to share their views with adults. Furthermore, this limitation is also an opportunity to reflect on the challenges that doing research with children entails and how this might relate to the overall lack of research in the field.

The four findings chapters that followed responded to each of the research sub-questions which served to answer the main question of this study. The key findings can be summarised as follows:

There are two different ways of tackling EE which are linked to specific understandings of the environment, environmental education and are rooted in contrasting images of childhood. At the Waldorf Preschool EE is assumed as a lifestyle, an idea that is funded on an understanding of EE as living in harmony with the environment, where the term environment is perceived as philosophical and a spiritual space. This way of doing EE is parallel to the education in the environment

approach in that the emphasis is on bonding with nature and appreciating its beauty. Other aspects such as the architecture and place also stood out as examples of how the idea of living in harmony with the environment is materialised and becomes an integral part of the preschool ethos. Understanding and practices around EE are highly driven by the image of children as spiritual and magical beings who need to be in close contact with nature in order to form a bond and appreciate it. There was a strong resistance to formally teaching children about the environment or environmental problems and activities such as dialogue or reflection were discouraged. Such images of childhood, embedded in the connection-to-nature discourse, not only risk prompting a nature-by-default approach (Elliott & Young, 2016) that ultimately hinders critical EE approaches, but they can also reproduce normalising discourses around the idea of a natural childhood.

Differently, at the City Preschool EE appears as an extracurricular activity channelled through a botany club. EE was understood as taking care of the place where we live, and the dominant EE approach was education about the environment. Two images of the child were identified: the dominant one was the adult in training while the child as social agent was emergent. On the one hand, the image of the child as an adult in training relates to the notion of learning outcomes promoted by the National Curriculum and is predominantly driven by school readiness and investment-return discourses. Activities such as lecturing, and memorisation relate to this image and show the strong influence of transmissive approaches of education and narrow views of EE.

On the other hand, the image of the child as social agent connects with a view of education as a socio-cultural process and connects to the Reggio Emilia approach. Activities that promote dialogue, participation and actively listening and valuing children's voices as well as children expressing their opinions, taking a stand and showing proactivity to take care of other living beings are examples of how this image looks in practice.

Overall, this study concludes that despite the interest in EE neither of the preschools showed a critical EE approach. The approaches were considered narrow given that the focus was either on education about the environment or education in the

273

environment, but not necessarily a combination of both. More importantly in neither of the preschools was the view of the child as a competent social agent dominant.

The examination of the European pedagogies that guided the two cases studies also showed how, if not critically scrutinised, there is a tendency to embrace and reproduce discourses that position children and adults as beings separated from the real and complex sociocultural context and history which they are part of. This then results in depoliticising preschool education by viewing it merely as child-centred, thus creating a tunnel vision in which ECEC is reduced to an arena that should only be concerned with children's natural development and upbringing or merely with child-friendly effective teaching methods.

Notably, at the Waldorf Preschool despite the possibilities that the view of EE as a lifestyle could offer, particularly the idea of trying to integrate practices to reduce environmental damage in different ways (for instance by organising walks to pick up litter, having a school built with eco-design principles and composting practices) the fact that children were not recognised as competent human beings who have the right and the capacity to form an opinion or make sense of their world around them elucidates a strong discursive barrier that hinders the possibility to move towards more critical approaches of EE in ECEC.

This aspect highlights the argument made earlier in this thesis that the dualistic logic that lies within the image of childhood as either "purely natural" or "purely cultural" needs to be reflected on and scrutinised (Taylor, 2013, p. xix). Instead, young children need to be recognised as people with both learning minds and learning bodies, with genuine feelings, interests and concerns and most of all, capable of making sense of the world around them and forming their own opinions.

10.2. Contribution to the Field

In this thesis I brought together EE, images of childhood and pedagogical models to deepen perspectives and generate critical debates about the role of images of childhood in the study of EE. This aspect served to corroborate and expand on the work of contemporary scholars (Duhn, 2012, Elliot & Davis, 2019; Elliott & Young, 2016) who argue that the romantic images of childhood that have prevailed the field

act as discursive barriers that reinforce the idea of "nature by default" (Elliott & Young, p.58) at ECEC level and therefore represent a barrier to move toward broader conceptions of EE.

My study went one step further by identifying and examining three dominant images of childhood in Mexican preschools and unveiling the ways in which these discourses act as generative mechanisms that can hinder the transition to more critical approaches of EE. Moreover, this study performed a very much needed critical analysis that scrutinised the ways in which taken for granted assumptions about childhood and nature operate in contemporary pedagogies, showing that both romantic and managerial discourses sit in opposition to the image of children as social agents, which is a core component within critical EE approaches that strive for sustainability. In that vein, this research has reclaimed the relevance and the need to transition towards broader and critical views of EE that go beyond merely bonding with nature or simply learning about the environment.

By undertaking a thoroughly contextualised examination of EE at the preschool level in Mexico, this study contributes to closing the gap in the paucity of research in EE in ECEC in Latin America. Importantly, to the best of the author's knowledge, no prior empirical research that focuses specifically on the preschool level and involves preschool children, teachers, and parents in one study has been undertaken. As a result, this research is groundbreaking in the field of EE in Mexico. Furthermore, by including young children as research participants whose voices are valued and respected, this research challenges prevalent developmental assumptions about children and thus serves as a turning point to encourage more research that includes young children as research participants.

Images of childhood is an aspect that is often overlooked when studying EE. Yet, my study has shown that they play a central role in shaping the ways in which EE is tackled. Overall, this study has demonstrated that images of childhood are a powerful discursive force that act as a generative mechanism that influences not only how children are viewed but also how the environment is perceived and how EE is practised. Therefore, identifying images of childhood and reflecting on how these influence interpretations and practices of the environment and EE is crucial to

understand the challenges and the possibilities needed to move towards more critical approaches of EE in ECEC.

10.3. Recommendations for Future Research

Given the exploratory nature of this study the conclusions drawn here should be taken as starting points for further research, rather than as final statements or absolute truths. Although my findings have shown that images of childhood are nodal to better understand EE in ECEC and shed light on the constraints and the possibilities to move toward broader conceptions of EE in ECE, there are many other aspects that need to be investigated further and viewed from different angles. Next, I suggest some aspects that I believe are necessary to advance knowledge of the phenomena and that require a more detailed study:

- A national scale study that examines trends and approaches of EE specifically at the preschool level. Given the lack of research in the country more systematic reviews of the literature will be of great importance.
- More in depth case studies conducted in Mexican public preschools. An important aspect to consider is funding and cooperation from the state and local authorities to access the preschools.
- Research that undertakes a multidisciplinary approach to examine the relations between EE and spatial approaches in ECEC, for instance by looking at aspects such as architecture and use of spaces in relation to images of childhood.
- Studies incorporating innovative methodologies that facilitate the participation of children in research and allow to gain further understanding about the ways in which they construct and navigate EE.
- Empirical studies that examine more closely images of childhood and the links between children and plants or other living beings in EE, yet adopting a critical stand that moves away from romantic views of childhood and the environment.

- More research that includes indigenous preschool and communities. This could be done by searching specifically for indigenous preschools or other type of EE projects in indigenous communities.

- A broader and deeper analysis that addresses Mexico's pre-colonial past and post-colonial present is necessary to further understand, unsettle and discuss the prevalence of uncritical EE approaches and overreliance of wester pedagogies and colonial legacies in ECEC. This complex task requires—in addition to the critical examination of images of childhood—to incorporate other theoretical lenses and concepts that allow to examine aspects such as the decolonization of the curriculum, the relation of human with the more-than-human, as well as the intersections of urban/nature/childhood in environmental education (Duhn et al., 2017). The emergent post-human perspectives offer a good alternative to complement the analysis of images of childhood and EE approaches at preschool level, by moving away from the tendency to naturalize childhood and humanize nature, and importantly to recognize and address the entanglement and troubled relationships that exist in the current context.

I hope my study invites and inspire other students, researchers, educators and parents to reflect and investigate this topic further. I reiterate the importance of identifying and critically analysing images of childhood and bringing contemporary approaches to ECEC and EE that challenge taken for granted assumptions of childhood and nature. I hope my study serves as a referent for future research in the field, particularly in Mexico and Latin America.

References

Abebe, T. (2019). Reconceptualising children's agency as continuum and interdependence. *Social Sciences*, *8*(3), 81. https://doi.org/10.3390/socsci8030081

Adams, P. (2011). From 'ritual' to 'mindfulness': Policy and pedagogic positioning. *Discourse: Studies in the Cultural Politics of Education*, *32*(1), 57–69.

https://doi.org/10.1080/01596306.2011.537071

Adams, S., & Savahl, S. (2017). Nature as children's space: A systematic review. *The Journal of Environmental Education, 48*(5), 291–321. https://doi.org/10.1080/00958964.2017.1366160

Ailwood, J. (2008). Mothers, teachers, maternalism and early childhood education and care: some historical connections. *Contemporary Issues in Early Childhood, 8*(2), 157–165. https://doi.org/10.2304/ciec.2007.8.2.157

Albarrán Sollerio, A. A., & Osorio García, M. (2020). La producción del espacio social en Playa del Carmen, Quintana Roo, México. *Espacialidad, Socialidad e Historicidad. Revista Brasileira de Pesquisa em Turismo, 14*(2), 95-122. https://doi.org/10.7784/rbtur.v14i2.1808

Alderson, P. (2016). *The politics of childhoods real and imagined: Practical application of critical realism and childhood studies*. Routledge.

Alderson, P., & Morrow, V. (2011). *The ethics of research with children and young people: A practical handbook*. SAGE Publications. https://dx.doi.org/10.4135/9781446268377

Alldred, P., & Burman, E. (2005). Analysing Children's Accounts Using Discourse Analysis. In S. Greene & D. Hogan (Eds.), *Researching children's experiences: Approaches and methods* (pp. 175–198). Sage. http://hdl.handle.net/2438/1504

Alonso-Velasco, I., & Velasquez-Torres, D. (2019). El contexto geopolítico de la explotación forestal en la Península de Yucatán, México. *Perspectiva Geográfica*, 24(1). https://doi.org/10.19053/01233769.8427

Álvarez-Zeferino, J. C., Ojeda-Benítez, S., Cruz-Salas, A. A., Martínez-Salvador, C., & Vázquez-Morillas, A. (2020). Microplastics in Mexican beaches. *Resources, Conservation and Recycling, 155*, 104633. https://doi.org/10.1016/j.resconrec.2019.104633

Ansell, N. (2005). *Children, youth and development*. Routledge

Ardoin, N., & Bowers, A. (2020). Early childhood environmental education: A systematic review of the research literature. *Educational Research Review, 31*. https://doi.org/10.1016/j.edurev.2020.100353

Ärlemalm-Hagsér, E., & Elliott, S. (2017). Special Issue: Contemporary research on early childhood education for sustainability. *International Journal of Early Childhood, 49*(3), 267-272. https://doi.org/10.1007/s13158-017-0207-3

Ávila-García, P., & Sánchez, E. L. (2012). The environmentalism of the rich and the privatization of nature: High-end tourism on the Mexican coast. *Latin American Perspectives, 39*(6), 51–67. https://doi.org/10.1177/0094582X12459329

Banco Mundial. (2018, September 20). *Los desechos 2.0: Un panorama mundial de la gestión de desechos sólidos hasta 2050.* https://www.bancomundial.org/es/news/infographic/2018/09/20/what-a-waste-20-a-global-snapshot-of-solid-waste-management-to-2050

Barraza, L. (2001). Environmental education in Mexican Schools: The primary level. *Journal of Environmental Education, 32*(3), 31-6. https://doi.org/10.1080/00958960109599143

Barraza, L., & Walford, R. A. (2002). Environmental education: A comparison between English and Mexican school children. *Environmental Education Research, 8*(2), 171–186. https://doi.org/10.1080/13504620220128239

Barraza, L., Duque-Aristizabal, A., & Rebolledo, G. (2003). Environmental education: From policy to practice. Environmental Education Research, 9(3), 347-357. https://doi.org/10.1080/13504620303462

Barraza, L. (1999). Children's drawings about the environment. *Journal of Environmental Education Research, 5*(1), 49–66. https://doi.org/10.1080/1350462990050103

Bascopé, M., Perasso, P., & Reiss, K., (2019). Systematic review of education for sustainable development at an early stage: Cornerstones and pedagogical approaches for teacher professional development. *Sustainability*, *11*(3), 719. https://doi.org/10.3390/su11030719

Baxter, J. (2003). *Positioning gender in discourse: A feminist methodology*. Palgrave Macmillan.

Baxter, J. (2016). Positioning language and identity. Poststructuralist perspectives. In S. Preece (Ed.), *The Routledge Handbook of Language and Identity* (pp. 34–49). Abingdon, Oxon: Routledge Handbooks Online. https://doi.org/10.4324/9781315669816

Benavides-Lahnstein, A. (2017). *Conceptions of environmental education in Mexican primary education: Teachers' views and curriculum aims*. [Doctoral dissertation, University of Leeds]. https://etheses.whiterose.ac.uk/20134/2/Benavides_Lahnstein_AI_Education_ PhD_2018.pdf

Benavides-Lahnstein, A., & Ryder, J. (2020). School teachers' conceptions of environmental education: Reinterpreting a typology through a thematic analysis. *Environmental Education Research, 26*(1), 43-60. https://doi.org/10.1080/13504622.2019.1687649

BERA. (2014). *Ethical guidelines for educational research*. BERA.

Blom, B., & Morén, S. (2011). Analysis of generative mechanisms. *Journal of Critical Realism, 10*(1), 60–79. https://doi.org/10.1558/jcr.v10i1.60

Boland, N. (2015). The globalisation of Steiner education: Some considerations. *Research on Steiner Education*, 6(Special issue), pp. 192-202. https://www.rosejourn.com/index.php/rose/article/view/285

Borg, F., & Pramling Samuelsson, I. (2022). Preschool children's agency in education for sustainability: the case of Sweden. *European Early Childhood*

Education Research Journal, 30(1), 147-163.
https://doi.org/10.1080/1350293X.2022.2026439

Bowe, R., Ball, J.S., & Gold, A. (1992). *Reforming education and changing schools.* Routledge.

Boyd, D. (2018). Early childhood education for sustainability and the legacies of two pioneering giants. *Early Years*, *38*(2), 227-239. https://doi.org/10.1080/09575146.2018.1442422

Boyd, D., Hirst, N., & Siraj-Blatchford, J. (Eds.). (2018). *Understanding sustainability in early childhood education: Case studies and approaches from across the UK.* Routledge.

Branscombe, N. A., Castle, K., Dorsey, A. G., Surbeck, E., & Taylor, I. B. (2000). *Early childhood education: A constructivist approach*. Houghton Mifflin Company.

Braun, B. (2002). Colonialism's afterlife: Vision and visuality on the Northwest Coast, *Cultural Geographies 9* (2), 202-247.

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3 (2), 77-101.

Bronfenbrenner, U., & Morris, P. A. (2006). The bioecological model of human development. In R. Lerner, & W. Damon (Eds.), *Handbook of child psychology: Theoretical models of human development* (pp. 793–828). John Wiley & Sons Inc.

Brown, D. (2013). Tourists as colonizers in Quintana Roo, Mexico. *The Canadian Geographer, Le Géographe canadien*, *57*(2), 186-205 https://onlinelibrary.wiley.com/doi/10.1111/cag.12008

Burman, E. (1994). *Deconstructing developmental psychology*. Routledge.

Caiman, C., & Lundegård, I. (2014). Pre-school children's agency in learning for sustainable development. *Environmental Education Research, 20*(4), 437–459. https://doi.org/10.1080/13504622.2013.812722

Camacho-Lomelí, R. (2015). Urbanización turístico-costera desigual en Playa del Carmen, Quintana Roo. *GeoGraphos, 6*(77), 107-134. http://hdl.handle.net/10391/6574

Cannella, G. (1997). *Deconstructing Early Childhood Education: Social Justice and Revolution.* Peter Lang.

Carlsson, B. (2001). Depicting Experiences. *Scandinavian Journal of Educational Research, 45*(2), 125-143. https://doi.org/10.1080/00313830120052723

Castillo, C., Flores, M., Rodao, F., Muñiz, M., Rodríguez, J., & Unturbe, J. (1980). *Educación preescolar métodos, técnicas y organización.* Aconcagua.

Castillo-Pavón, O., & Méndez-Ramírez, J. (2017). Los desarrollos turísticos y sus efectos medioambientales en la Riviera Maya, 1980-2015. *Quivera Revista de Estudios Territoriales, 19*(2), 101-118. https://quivera.uaemex.mx/article/view/9761

Castillo-Troncoso, A. D., (2003). Imágenes y representaciones de la niñez en México en el cambio del siglo XIX al XX: Algunas consideraciones en torno a la construcción de una historia cultural. *Cuicuilco, 10*(29), 0. https://www.redalyc.org/articulo.oa?id=35102909

Castree, N. (2008). Neoliberalising Nature: Processes, effects, and evaluations. *Environment and planning A: Economy and Space, 40*(1), 153–173. https://doi.org/10.1068/a39100

Chamizo, O. (1990). Los contenidos ambientales en el nivel de educación preescolar. *Revista Cero en conducta, 17*(5), 41-44.

Chawla, L. (1998). Significant Life Experiences Revisited: A Review of Research on Sources of Environmental Sensitivity. *The Journal of Environmental Education, 29*(3), 11-21, https://doi.org/10.1080/00958969809599114

Chawla, L. (2007). Childhood Experiences Associated with Care for the Natural World: A Theoretical Framework for Empirical Results. *Children, Youth and Environments, 17*(4), 144-170. http://www.colorado.edu/journals/cye.

Chawla, L. (2020). Childhood nature connection and constructive hope: A review of research on connecting with nature and coping with environmental loss. People and Nature, *2*(3), 619–642. https://doi.org/10.1002/pan3.10128

Chawla, L. (Ed.) 2002. *Growing up in an urbanising world*. UNESCO/Earthscan Publications.

Chetcuti, D., & Pace, P.(2012). Portfolios in Environmental Education: The TEPEE Project. *Journal of Baltic Science Education, 11*(1),16-28. doi: 10.33225/jbse/12.11.16

Christensen, M., Åberg, A., Lidström, S., & Larsen, K. (2018). Environmental Themes in Popular Narratives. *Environmental Communication, 12*(1), 1-6. https://doi.org/10.1080/17524032.2018.1421802

Christensen, P., & James, A. (2000). Research with Children: Perspectives and Practices. Falmer Press.

Clark, A., & Moss, P. (2005). *Spaces to play: More listening to young children using the Mosaic approach*. National Children's Bureau.

Clark, A., & Moss, P. (2011). *Listening to young children: The mosaic approach*. National Children's Bureau.

Cohen, L., Manion, L., & Morrison, K. (2011). *Research methods in education* (7th ed.). Routledge: Oxford.

CONABIO, (2021, November 25). *La biodiversidad en Quintana Roo: Estudio de estado.* https://www.biodiversidad.gob.mx/region/EEB/estudios/ee_quintanaroo

Cornell, S. & Parker, J. (2010). Critical realist interdisciplinarity: A research agenda to support action on global warming. In Bhaskar, R., Frank, C., Høyer, K.G., Næss, P. and Parker, J. (Eds.) *Interdisciplinarity and Climate Change: Transforming knowledge and practice for our global future* (pp. 25–34). Routledge.

Corsaro, W. (2003). *We're friends, right? Inside kids' culture*. Joseph Henry Press.

Creswell, J.W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. SAGE.

Dahlberg, G., Moss, P., & Pence, A. (1999). *Beyond quality in early childhood education and care: Postmodern perspectives*. Falmer Press.

Daston, L. & Vidal, F. (Eds.). (2004). *The moral authority of nature*. University of Chicago Press.

Davis, J. (2005). Educating for sustainability in the early years: Creating cultural change in a child care setting. *Australian Journal of Environmental Education, 21*, 47-55. doi:10.1017/S081406260000094X

Davis, J. (2008). What might education for sustainability look like in early childhood? A case for participatory, whole-of-settings approaches. In I. Samuelsson, & Y. Kaga (Eds.), *The contribution of early childhood education to a sustainable society* (pp. 18-24). UNESCO.

Davis, J. (2009). Revealing the research 'hole' of early childhood education for sustainability: a preliminary survey of the literature. *Environmental Education Research, 15*(2), 227–241. https://doi.org/10.1080/13504620802710607

Davis, J. (2014). Examining early childhood education through the lens of education for sustainability: Revisioning rights. In Davis, J., & Elliot, S. (Eds.), *Research in early childhood education for sustainability: International perspectives and provocations* (pp. 21-37). Routledge.

Davis, J. M. (2015). What is early childhood education for sustainability and why does it matter? In J. Davis (Ed.), *Young Children and the Environment: Early Education for Sustainability* (pp. 7–31). Cambridge University Press.

Davis, J. M. (Ed.). (2014). *Young children and the environment: Early education for sustainability*. Cambridge University Press.

Davis, J., & Elliott, S. (2014). An orientation to early childhood education for sustainability and research–framing the text. In Davis, J., & Elliott S. (Eds.), *Research in early childhood education for sustainability* (pp. 1-17). Routledge.

De Alba, A., & Viesca, M. (1992). Análisis curricular de contenidos ambientales. In T. Wuest, (Ed.), *Ecología y educación. Elementos para el análisis de la dimensión en el currículum escolar* (pp. 197-223). UNAM.

Dean, M. (1999). *Governmentality: Power and Rule in Modern Society*. Sage.

Dillon, J., Achiam, M., & Glackin, M. (2021). The role of out-of-school science education in addressing wicked problems: An introduction. In Achiam, M., Dillon, J., & Glackin, M. (Eds.), *Addressing wicked problems through science education. contributions from science education research*. Springer. https://doiorg.libproxy.ucl.ac.uk/10.1007/978-3-030-74266-9_1

Dirección General de Educación Preescolar (1981). *Guía didáctica para orientar el desarrollo del lenguaje oral y escrito en el nivel preescolar*. Secretaría de Educación Pública. https://newz33preescolar.files.wordpress.com/2019/03/guiadidacticaparaorien tareldesarrollodellenguajeoralyescritoenelnivelpreescolarcorrecta-170323040253-compressed.pdf

Domingues, M. (2019). *Identifying with Remida: Early Childhood Educators' Experiences with Reuse Materials in Reggio Emilia Inspired Identity Studies*. [Doctoral dissertation, Portland State University ProQuest Dissertations Publishing].https://www.proquest.com/openview/42976672492abf1d1507c658 f4ee5ed6/1.pdf?pq-origsite=gscholar&cbl=18750&diss=y

Duhn, I. (2006). *Cartographies of childhood: mapping the modern/global child*. [Doctoral dissertation, The University of Auckland]. https://researchspace.auckland.ac.nz/bitstream/handle/2292/375/02whole.pdf ?sequence=2&isAllowed=y

Duhn, I. (2012). Making 'place' for ecological sustainability in early childhood education. *Environmental Education Research, 18*(1), 19-29. https://doi.org/10.1080/13504622.2011.572162

Duhn, I., Malone K., & Tesar M. (2017). Troubling the intersections of urban/nature/childhood in environmental education. *Environmental Education Research, 23*(10), 1357-1368. https://doi.org/10.1080/13504622.2017.1390884

Easton, G. (2010). Critical Realism in Case Study Research. *Industrial Marketing Management, 39*(1), 118-128. https://doi.org/10.1016/j.indmarman.2008.06.004

Edwards, A. (2001). *Qualitative designs and analysis*. Routledge

Edwards, C., Gandini, L., & Forman, G. (Eds.). (1998). Hundred Languages of Children: The Reggio Emilia Approach to Early Childhood Education. Elsevier Science.

Eichsteller, G., & Holthoff, S. (2011). Conceptual Foundations of Social Pedagogy: A Transnational Perspective from Germany. In: C. Cameron, & P. Moss (Eds.), *Social Pedagogy and Working with Children and Young People: Where Care and Education Meet* (pp. 33-52). Jessica Kingsley Publishers.

Elliott, S. (2010). Essential, Not Optional: Education for Sustainability in Early Childhood Centres. *Childcare Information Exchange, 32*(2), 34-37. https://exchangepress.com/library/5019234.pdf

Elliott, S., & Davis, J. (2009). Exploring the resistance: an Australian perspective on educating for sustainability in early childhood. *International Journal of Early Childhood, 41*(2), 65-77. https://doi.org/10.1007/BF03168879

Elliott, S., & Young, T. (2016). Nature by Default in Early Childhood Education for Sustainability. *Australian Journal of Environmental Education, 32*(1), 57-64. doi:10.1017/aee.2015.44

Ellis, C. (2007). Telling Secrets, Revealing Lives: *Relational Ethics in Research With Intimate Others. Qualitative Inquiry, 13*(1), 3–29. https://doi.org/10.1177/1077800406294947

Elo, S., Kääriäinen, M., Kanste, O., Pölkki, T., Utriainen, K., & Kyngäs, H. (2014). Qualitative Content Analysis: A Focus on Trustworthiness. *SAGE Open, 4*(1). https://doi.org/10.1177/2158244014522633

Engdahl, I. (2015). Early Childhood Education for Sustainability: The OMEP World Project. *International Journal of Early Childhood, 47*(3), 347-366 doi:10.1007/s13158-015-0149-6

Fernández-Rodríguez, A., Figueroa de la Fuente, M., Medina Alonso, A., & Pacheco Cocom, M. (2020). Internal Migration and Labor Dynamics in the Tourist Industry of the Riviera Maya, Quintana Roo, Mexico. *Revista ABRA, 40*(60), 77-98. https://doi.org/10.15359/abra.40-60.3

Ferreiro, E., & Tabersoky, A. (2005). *Los sistemas de escritura en el desarrollo del niño*. Siglo Veintiuno.

Flick, U. (2009) *An Introduction to Qualitative Research.* Sage.

Flyvbjerg, B. (2006). Five Misunderstandings About Case-Study Research. *Qualitative Inquiry*, 12(2), 219–245. https://doi.org/10.1177/1077800405284363

Forman, G., & Fyfe, B. (1998). Negotiated learning through design, documentation, and discourse. In C. Edwards, L. Gandini & G. Forman (Eds.), *The Hundred Languages of Children: The Reggio Emilia Approach: Advanced reflections.* (pp. 239-260). Ablex Publishing.

Foucault, M, (1976). *Society Must Be Defended: Lectures at the Collège de France, 1975-1976*. Picador

Foucault, M. (1972). *The Archaeology of Knowledge.* Routledge.

Foucault, M. (1977). *Discipline and Punish: The Birth of the Prison*. Random House Vintage Books.

Foucault, M. (1980). *Power/knowledge: Selected Interviews and Other Writings 1971-1977*. Pantheon Books.

Foucault, M. (1982). The subject and the Power. *Critical Inquiry, 8*(4), 777-795. https://www.jstor.org/stable/1343197

Foucault, M. (1988). Technologies of the self. In L. H. Martin, H. Gutman, & P. H. Hutton (Eds.), *Technologies of the self: a seminar with Michel Foucault* (pp. 16-49). University of Massachusetts Press.

Foucault, M. (1997). Ethics: Subjectivity and truth. In Paul Rabinow (Ed.), *Essential works of Michel Foucault*. New Press.

Foucault, M. (2007). *The Politics of Truth*. Semiotext(e)

Fuchs, E. (2004). Nature and Bildung: Pedagogical naturalism. In L. Daston and F. Vidal (Eds.), *The Moral Authority of Nature (*pp. 155-81). University of Chicago Press.

Gallegos Ruiz, I. S., & Tinajero Villavicencio, M. G. (2022). Políticas para la educación preescolar indígena en México: entre la obligatoriedad y el rezago. *Voces De La educación*, *7*(14), 48-69.

Gardner, H. (1983). Frames of Mind: The Theory of Multiple Intelligences. Basic Books.

Gee, J. P. (2014). *How to do Discourse Analysis: A Toolkit*. Routledge.

Gilgun, J. (2010). Reflexivity and Qualitative Research. *Current Issues in Qualitative Research*: *An Occasional Publication for Field Researchers from a Variety of Disciplines*, 1(2). University of Minnesota.

Gobierno de Quintana Roo (n.d.). *Indicadores económicos 2018*. https://qroo.gob.mx/idefin/indicadores-economicos/#:~:text=Quintana%20Roo%20dentro%20de%20los,de%20creci miento%20para%20el%202018.

Golato, A. (2017). Naturally Occurring Data. In A. Barron, Y. Gu & G. Steen (Eds.), *The Routledge Handbook of Pragmatics*. (1st ed. 21–6). Routledge. https://doi.org/10.4324/978131566892

González Gaudiano, E. (2000). Complejidad en educación ambiental. *Tópicos en educación ambiental, 2*(4), 21-32.

González-Gaudiano, E. (1994). *Elementos estratégicos para el desarrollo de la educación ambiental en México*. Instituto Nacional de Ecología.

González-Gaudiano, E. (2003). Atisbando la construcción conceptual de la educación ambiental en México. In M. Bertely Busquets (Ed.), *Educación, derechos sociales y equidad*, Tomo I: Educación y diversidad cultural educación y medio ambiente (pp. 243-275). Consejo Mexicano de Investigación Educativa.

González-Gaudiano, E. (2005). Education for sustainable development: Configuration and meaning. *Policy futures in education, 3*(3), 243–250.

González-Gaudiano, E. (2006). Environmental education: a field in tension or transition? *Environmental Education Research*, *12*(3-4), 291–300. https://doi.org/10.1080/13504620600799042

González-Gaudiano, E. (2007). Schooling and environment in Latin America in the third millennium. *Environmental Education Research*, *13*(2), 155–169. https://doi.org/10.1080/13504620701295684

González-Gaudiano, E. (2012). La representación social del cambio climático: Una revisión internacional. *Revista Mexicana De Investigación Educativa, 17*(55), 1035-1062. https://www.redalyc.org/articulo.oa?id=14024273003

González-Gaudiano, E., & Foladori, G. (2001). En pos de la historia en educación ambiental. *Tópicos en educación ambiental, 3*(8), 28-43.

Gopnik, A. (2009). *The philosophical baby: What children's minds tell us about truth, love & the meaning of life*. The Bodley Head.

Gray, R. (2010). A re-evaluation of social, environmental and sustainability accounting: An exploration of an emerging trans-disciplinary field? *Sustainability Accounting, Management and Policy Journal*, 1, 11-32. https://doi.org/10.1108/20408021011059205

Green, C. J. (2015). Toward Young Children as Active Researchers: A Critical Review of the Methodologies and Methods in Early Childhood Environmental Education. *The Journal of Environmental Education, 46*(4), 207–229. https://doi.org/10.1080/00958964.2015.1050345

Griffin M., & Karasik. R. (2022). *Plastic Pollution Policy Country Profile: Mexico*. Nicholas Institute for Environmental Policy Solutions. https://nicholasinstitute.duke.edu/sites/default/files/projects/Plastic-Pollution-Policy-Country-Profile-Mexico.pdf

Gutek, G. (2011). *Historical and philosophical traditions of education*: *A biographical introduction*. Pearson.

Hägglund, S., & Johansson E. M. (2014). Belonging, value conflicts and children's rights in learning for sustainability in early childhood. In Davis J., & Elliot S.

(Eds.), *Research in early childhood education for sustainability: International perspectives and provocations* (pp. 38–48). Routledge.

Hägglund, S., & Pramling-Samuelsson, I. (2009). Early childhood education and learning for sustainable development and citizenship. *International Journal of Early Childhood*, *41*(2), 49-63. https://doi.org/10.1007/BF03168878

Hall, K., Cunneen, M., Cunningham, D., Horgan, M., Murphy, R., & Ridgway, A. (2010). *Loris Malaguzzi and the Reggio Emilia Experience (Continuum Library of Educational Thought)*. Continuum. http://dx.doi.org.libproxy.ucl.ac.uk/10.5040/9781472541208

Hannigan, J. (2006). *Environmental sociology*. Routledge.

Haraway, D. (2010). When Species Meet: Staying with the Trouble. *Environment and Planning D: Society and Space, 28*(1), 53–55. https://doi.org/10.1068/d2706wsh

Haraway, D. (2016*). Staying with the Trouble: Making Kin in the Chthulucene*. Duke University Press.

Hardman, C. (1973). Can there be an anthropology of children? *Journal of the Anthropology Society Oxford, 4*(1), 85-99.

Harper, D. (2002). *Talking about pictures: A case for photo elicitation*. Visual Studies, *17*(1), 13-26. https://doi.org/10.1080/14725860220137345

Harper, D. (2010). Fixing Work and the work of repair. *Contemporary Sociology*, 39(3), 249–252. https://doi.org/10.1177/0094306110367906a

Hart, R. (1992). *Children's participation, from tokenism to citizenship*. UNICEF.

Hayward, B. (2020). *Children, citizenship and environment: #SchoolStrike Edition*. Routledge.

Heckman, J. J. (2012). The case for investing in disadvantaged young children. In B. Falk (Ed.), Defending early childhood: Keeping the promise of early education (pp. 235–242). Teachers College Press.

Hedefalk, M., Almqvist, J., & Östman, L. (2015). Education for sustainable development in early childhood education: a review of the research literature.

Environmental Education Research, *21*(7), 975–990.
https://doi.org/10.1080/13504622.2014.971716

Heiland, H. (1993). Friedrich Froebel (1782-1852). *Prospects: Quarterly Review of Comparative Education*, *23*(3-4), 473-49.

Hendrick, H. (2000). The child as a social actor in historical sources. In P. Christensen, & A. James (Eds.), *Research with Children: Perspectives and Practices.* (pp. 36–61). Falmer.

Herrera-Feria, M. (2007). *Estudios sociales sobre la infancia en México*. Benemérita Universidad Autónoma de Puebla.

Holstein, J. A., & Gubrium, J. F. (2013). The constructionist analytics of interpretive practice. In N. K. Denzin & Y. S. Lincoln (Eds.), *Strategies of qualitative inquiry* (pp. 253–289). Sage Publications.

Huckle, J., & Sterling, S. (1996). *Education for sustainability.* Earthscan Publications.

Hughes, P. (2001). Paradigms, methods and knowledge. In G. McNaughton, S. A. Rolfe, & I. Siraj-Blatchford (Eds), *Doing early childhood research: International perspectives on theory and practice* (pp. 31-55). Open University Press.

INEE. (2010). *La educación preescolar en México: Condiciones para la enseñanza y el aprendizaje.* INEE

INEE. (2018). La educación obligatoria en México. Instituto Nacional para la Evaluación de la Educación.
https://www.inee.edu.mx/wpcontent/uploads/2018/12/P1I243.pdf

INEGI (2015). Encuesta intercensal. Instituto Nacional de Estadística y Geografía.
https://www.inegi.org.mx/contenidos/programas/intercensal/2015/doc/eic_2015_presentacion.pdf

INEGI (2019). Indicadores de ocupación y empleo cifras oportunas durante marzo de 2019.
https://www.inegi.org.mx/contenidos/saladeprensa/boletines/2019/iooe/iooe2019_04.pdf

INEGI. (2020). Panorama sociodemográfico de Quintana Roo: Censo de Población y vivienda 2020 https://www.inegi.org.mx/contenidos/productos/prod_serv/contenidos/espanol/bvinegi/productos/nueva_estruc/702825197964.pdf

INEGI. (2022). *Encuesta nacional de ocupación y empleo, nueva edición (ENOEN) quintana roo cuarto trimestre de 2021.* https://www.inegi.org.mx/contenidos/saladeprensa/boletines/2022/enoe_ie/enoe_ie2022_02_QROO.pdf

Instituto Nacional de los Pueblos Indígenas. (2021). Estudio: Diagnóstico de migración en Playa del Carmen, Quintana Roo. https://www.inpi.gob.mx/dmdocuments/diagnostico-de-migracion-en-playa-del-carmen-quintana-roo.pdf

James, A. (1998). *Play in Childhood: An anthropological perspective*. Cambridge University Press.

James, A. (2010). Competition or Integration: The next step in childhood studies? *Childhood*, 17 (4), 485-499. https://doi.org/10.1177/090756820935078

James, A., & James, A. L. (2004). *Constructing childhood*: *Theory, policy and social practice.* Springer. https://doi.org/10.1007/978-0-230-21427-9

James, A., Prout, A., & Jenks, C. (1998). *Theorizing childhood.* Polity Press.

Jenks, C. (2004). Constructing childhood sociologically. In M. Kehily (Ed.), *An introduction to childhood studies* (pp 77-95). Open University Press.

Jenks, C. (2005). Editorial: A new death of childhood. *Childhood, 12*(1), 5-8. https://doi.org/10.1177/0907568205049888

Jickling, B. (2000). A Future for sustainability? *Water, air, & soil pollution, 123*, 467-476. https://doi.org/10.1023/A:1005211410123

Jickling, B., & Wals, A. E. J. (2012). Debating education for sustainable development 20 years after Rio: A conversation between Bob Jickling and Arjen Wals. *Journal of Education for Sustainable Development, 6*(1), 49–57. https://doi.org/10.1177/097340821100600111

Kahn, P. H., & Friedman, B. (1995). Environmental views and values of children in an inner city Black community. *Child Development, 66*(5), 1403–1417. https://doi.org/10.2307/1131654

Keith-Sagarin, S. (2003). Recovering the quality of Rudolf Steiner's educational work. In R. Steiner (Author), *What Is Waldorf education?: Three lectures* (pp. 7-34). Steiner Books.

Kennedy, D. (2000). The roots of child study: Philosophy, history and religion. *Teachers College Record*, *102*(3), 514-538. https://doi.org/10.1111/0161-4681.00066

Landi, L. & Pintus, A., (2022). A critical approach to the Reggio Emilia approach. *Educazione. Giornale di Pedagogia Critica*, *11*(1), 107-125. https://iris.unimore.it/retrieve/1861203e-e021-42ee-b42a-d20195c206c9/216-713-1-PB.pdf

Lee, J. (2001). Pre-school environmental education in Hong Kong: An exploratory study. *Australian Journal of Environmental Education, 17*, 25-33. https://doi.org/10.1017/S0814062600002408

Lee, J. (2019, October 1). *3 key Takeaways from the sustainable development goals summit.* United Nations Foundation. https://unfoundation.org/blog/post/3-takeaways-sdg-summit/

Lee, J. C.-K., & W. H. T. Ma. (2006). Early childhood environmental education: A Hong Kong example. *Applied Environmental Education & Communication, 5* (2), 83-94. https://doi.org/10.1080/15330150600648911

Leff, E., (2007). La complejidad ambiental. *POLIS, Revista Latinoamericana, 6*(16), 1-9. https://www.redalyc.org/articulo.oa?id=30501605

Lesnik-Oberstein, K. (1994). *Children's literature: Criticism and the fictional child*. Clarendon Press.

Lilja, M., & Vinthagen, S. (2014) Sovereign power, disciplinary power and biopower: resisting what power with what resistance? *Journal of Political Power*, *7*(1), 107-126. https://doi.org/10.1080/2158379X.2014.889403

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage.

Loeffler, T. A. (2004). A photo elicitation study of the meanings of outdoor adventure experiences. *Journal of Leisure Research, 36*(4), 536-556. https://doi.org/10.1080/00222216.2004.11950035

López, L., & Chanes, M. (1965). *El jardín de niños y su técnica: Segundo Curso*. Imprenta Mexicana.

Louv, R. (2005). *The last child in the woods: Saving our children from nature deficit disorder*. Algonquin Books.

Lucas, A. (1972). *Environment and environmental education: conceptual issues and curriculum applications*. [Doctoral dissertation, Ohio State University]. https://files.eric.ed.gov/fulltext/ED068371.pdf

Mac Naughton, G. (2005). *Doing Foucault in early childhood studies*: A*pplying poststructural ideas*. Routledge.

Madrid-Zubirán, S., Galeana-Pizaña, J.M. & Navarro-Duarte, C.L. (2021). *Análisis de los procesos de deforestación en Quintana Roo 2003-2018*. CONAFOR, CentroGeo. https://www.ccmss.org.mx/wp-content/uploads/CuadernilloCONAFOR-una-pagina.pdf

Malaguzzi, L. (1993). For an education based on relationships. *Young Children*, *49*(1), 9-12.

Malaguzzi, L. (1994). Your image of the child: Where teaching begins. *Exchange, 3*, 52–56. http://exchangepress.com/article/your-image-of-the-child-where-teaching-begins/5009652/

Malone K. (2008). *Every experience matters: An evidence based research report on the role of learning outside the classroom for children's whole development from birth to eighteen years*. UK Department of Children, School and Families. https://ltl.org.uk/wp-content/uploads/2019/02/every-experience-matters.pdf

Mansfield, B. (2004). Neoliberalism in the oceans: "Rationalization," property rights, and the commons question. *Geoforum, 35*(3), 313-326. https://doi.org/10.1016/j.geoforum.2003.05.002

Marcos-Iga, J., & Markowitz, N. (2005). *Assessment of environmental education programs: Final Report*. North American Wetlands Conservation Act.

Marcos-Iga, J., & Shaw, W. (2011). Current state of environmental education in Mexico: a Study on Practices, Audiences, Settings and Topics. *Applied Environmental Education & Communication, 10*(4), 219-227. https://doi.org/10.1080/1533015X.2011.669687

Martínez Iñiguez, J. E., Tobón, S., Serna Huesca, O., & Gómez González, J. A. (2020). Autonomía curricular en Educación Básica. Una propuesta de innovación en el Modelo Educativo 2017 en México. *Páginas De Educación, 13*(1), 107-125. https://doi.org/10.22235/pe.v13i1.1914

Mason, J. (2002) *Qualitative researching*. Sage Publications.

Matthews, B., & Ross, L. (2010) *Research methods*. Pearson Longman.

Maxwell, J. A. (2009). Designing a qualitative study. In L. Bickman, & D. J. Rog (Eds.), *The Sage handbook of applied social research methods* (pp. 214–253). Sage Publications Inc.

Maxwell, J. A. (Ed.). (2005) *Qualitative research design: An interactive approach*. Sage.

Mayall, B. (2000). The sociology of childhood in relation to children's rights. *The International Journal of Children's Rights, 8*(3), 243–259. DOI:10.1163/15718180020494640

Mayall, B. (2001). Understanding childhoods: a London study. In L. Alanen, & B. Mayall (Eds.), *Conceptualising child-adult relations* (pp. 114-128). Routledge Falmer.

Mayall, B. (2008). Conversations with children. In P. Christensen, & A. James (Eds.), *Research with children: Perspectives and practices* (pp. 109-124). Abingdon: Routledge.

Mayall, B. (2012). An afterword: Some reflections on a seminar series. *Children's Geographies, 10*(3), 347-355. https://doi.org/10.1080/14733285.2012.693383

McCarthy, J., & Prudham, S. (2004). Neoliberal Nature and the Nature of Neoliberalism. *Geoforum, 35*(3) 275–283. https://www.sciencedirect.com/journal/geoforum/vol/35/issue/3

McDermott L., O'Sullivan T., Stead M., & Hastings G. (2006). International food advertising, pester power and its effects. *International Journal of Advertising*, 25, 513–539. https://doi-org.libproxy.ucl.ac.uk/10.1080/02650487.2006.11072986

Middlemiss, L. (2014). Individualised or participatory? Exploring late-modern identity and sustainable development. *Environmental Politics, 23*(6), 929-946. https://doi.org/10.1080/09644016.2014.943010

Monroe, M., Andrews, E., & Biedenweg, K. (2008). A Framework for Environmental Education Strategies. *Applied Environmental Education & Communication, 6*(3-4), 205-216, https://doi.org/10.1080/15330150801944416

Moss, P. (2006). Farewell to Childcare? *National Institute Economic Review*, 195(1), 70–83. https://doi.org/10.1177/0027950106064040

Moss, P. (2010). *What is your image of the child*. UNESCO Policy Brief. https://unesdoc.unesco.org/ark:/48223/pf0000187140

Moss, P., Dillon, J., & Statham, J. (2000). The "child in need" and "the rich child": discourses, constructions, and practice. *Critical Social Policy*, 20(2), 233-254. https://doi.org/10.1177/026101830002000203

Muñoz-Cadena, C., Estrada-Izquierdo, I., & Morales-Pérez, R. E. (2016). Logros de la educación ambiental y la sustentabilidad urbana en México. *Revista electrónica de investigación educativa, 18*(3), 37-50. https://www.redalyc.org/articulo.oa?id=15547471003

Nielsen, T. G., & Calder, W. (2009). The Contribution of Early Childhood Education to a Sustainable Society: Reviews. *Journal of Education for Sustainable Development*, 3(1), 111-115. https://doi.org/10.1177/097340820900300120

Novo, M. (1996). La educación ambiental formal y no formal: Dos sistemas complementarios. *Revista Iberoamericana de Educación*, 11, 75-102. https://doi.org/10.35362/rie1101158

Nxumalo, F., & Pacini-Ketchabaw, V. (2017). 'Staying with the trouble' in child-insect-educator common worlds. *Environmental Education Research, 23*(10), 1414-1426. https://doi.org/10.1080/13504622.2017.1325447

OECD. (2006). OECD Annual Report 2006. https://doi.org/10.1787/annrep-2006-en

Oldfield, L., & Boyd D. (2017). *The legacy of Rudolf Steiner*. Routledge

Olvitt, L. (2017). Education in the Anthropocene: Ethicomoral dimensions and critical realist openings, *Journal of Moral Education*, *46*(4), 396-409, https://doi.org/10.1080/03057240.2017.1342613

Orr, D. (2004). *Earth in Mind: On Education, the Environment and the Human Prospect.* Island Press.

Osgood, J. (2006). Deconstructing Professionalism in Early Childhood Education: Resisting the Regulatory Gaze. *Contemporary Issues in Early Childhood*, *7*(1), 5. https://doi.org/10.2304/ciec.2006.7.1.5

Oswell, D. (2013). *The Agency of Children: From Family to Global Human Rights.* Cambridge University Press.

Otto, S., & Pensini, P. (2017). Nature-based environmental education of children: Environmental knowledge and connectedness to nature, together, are related to ecological behavior. *Glob. Environmental Change. 47*, 88–94.

Pace, P. (2010). Education for sustainable development: Current fad or renewed commitment to action? *Journal of Baltic Science Education, 9*(4), 315-323. http://oaji.net/articles/2014/987-1405172843.pdf

Pacini-Ketchabaw, V., & Taylor, A. (Eds.). (2015). *Unsettling the Colonial Places and Spaces of Early Childhood Education* (1st ed.). Routledge. https://doi-org.libproxy.ucl.ac.uk/10.4324/9781315771342

Palmer, J. (1998). *Environmental education in the 21st century: Theory, Practice, Progress and Promise.* Routledge.

Palmer, S. (2006). *Toxic Childhood: How the modern world is damaging our children and what we can do about It*. Orion Books.

Paredes-Chi, A., & Viga-de Alva, M. (2018). Environmental education (EE) policy and content of the contemporary (2009–2017) Mexican national curriculum for primary schools. *Environmental Education Research, 24*(4) 564-580. https://doi.org/10.1080/13504622.2017.1333576

Parker, I. (1992). *Discourse dynamics: Critical Analysis for Social and Individual Psychology.* Sage.

Parker, I. (1994). Reflexive research and the grounding of analysis: Social psychology and the psy-complex. Journal of Community and Applied Social Psychology, 4(4), 239–252. https://doi.org/10.1002/casp.2450040404

Pavlova, M. (2011). ESD through technology education: Contextualisation of approaches. *African Journal of Research in Mathematics, Science and Technology Education, 15*(3), 41-55. https://doi.org/10.1080/10288457.2011.10740717

Pavlova, M. (2012). Towards using transformative education as a benchmark for clarifying differences and similarities between environmental education and education for sustainable development. *Environmental Education Research*, 19(5), 656–672. http://dx.doi.org/10.1080/13504622.2012.736476

Pearson, E., & Degotardi, S. (2009). Education for sustainable development in early childhood education: A global solution to local concerns? *International Journal of Early Childhood, 41*, 97-111. https://doi.org/10.1007/BF03168881

Peza-Hernández, G. (2013). *Educación Ambiental para la sustentabilidad en la formación docente: Aproximaciones conceptuales, procesos formativos y aportes didácticos.* IIEPE

Pineda, C., López-Medellín, X., Wehncke, E., & Maldonado-Almanza B. (2018). Construir sociedades comprometidas con el entorno natural: Educación ambiental en niños del sur de Morelos, México. *Región y sociedad, 30*(72). https://doi.org/10.22198/rys.2018.72.a896

Poder Ejecutivo Federal & Secretaría de Educación Pública. (1989). *Plan Nacional de Desarrollo 1989-1994.* Presidencia de la República.

Poer, N. J. (2008). Reflections on the Sistine Madonna. *The Online Waldorf Library Journals*, (55). https://www.waldorflibrary.org/journals/15-gateways/104-fallwinter-2008-issue-55-reflections-on-the-sistine-madonna

Popkewitz, T. S. (2001). Pacts / partnerships and governing the parent and child. *Current Issues in Comparative Education*, 3(2), 1–8.

Potts, A., & Haraway, D. (2010). Kiwi chicken advocate talks with Californian dog companion. *Feminism & Psychology*, 20(3), 318–336. https://doi.org/10.1177/0959353510368118

Powell, S., & Somerville, M. (2018). Drumming in excess and chaos: Music, literacy and sustainability in early years learning. *Journal of Early Childhood Literacy*, *20*(4), 839-861. https://doi.org/10.1177/146879841879260

Pramling Samuelsson, I. (2011). Why we should begin early with ESD: The role of early childhood education. *International Journal of Early Childhood*, *43*(2), 103-118. https://doi.org/10.1007/s13158-011-0034-x

Pramling Samuelsson, I., & Kaga, Y. (Eds.). (2008). *The contribution of early childhood education to sustainable society*. UNESCO.

Prout, A. (2005). *The future of childhood: Towards the Interdisciplinary study of children*. Routledge Falmer.

Punch, K. (2009). *Introduction to research methods in education*. Sage Publications.

Punch, S. (2002). Research with children: The Same or different from research with adults? *Childhood*, 9(3), 321–341. https://doi.org/10.1177/0907568202009003005

Pyle, A. (2013). Engaging young children in research through photo elicitation. *Early Child Development and Care, 183*(11), 1544-1558. https://doi.org/10.1080/03004430.2012.733944

Qvortrup, J. (1994). Childhood matters: An Introduction. In J. Qvortrup, M. Bardy, G. Sgritta, & H. Wintersberger (Eds.), *Childhood Matters: Social Theory, Practice and Politics* (pp. 1-23). Ashgate Publishing.

Rawson, M. (2010). Sustainable teacher learning in Waldorf education: A socio-cultural perspective. *Research on Steiner Education, 1*(2), 26-42. https://www.rosejourn.com/index.php/rose/article/view/49/82

Rinaldi, C. (1998). Projected curriculum and documentation. In C. Edwards, L. Gandini, & G. Forman (Eds.), *The hundred languages of children: The Reggio Emilia approach - Advanced reflections* (Cpp.113–125). Ablex Publishing.

Rinaldi, C. (2005). Documentation and assessment: What is the relationship?. In C. Alison, A.T. Kjorholts & P. Moss (Eds.), *Beyond listening* (pp. 17-28). Policy Press https://doi.org/10.51952/9781447342403.ch002

Rinaldi, C. (2005). *In Dialogue with Reggio Emilia: Listening, researching and learning*. Routledge.

Roberts-Holmes, G. (2017). Loris Malaguzzi, Reggio Emilia and democratic alternatives to early childhood education assessment. *FORUM, 59*(2), 159-168. https://doi.org/10.15730/forum.2017.59.2.159

Robottom, I. (2005) Critical environmental education research: Re-Engaging the debate. *Canadian Journal of Environmental Education*, *10*(1), 62-78. https://eric.ed.gov/?id=EJ881775

Robottom, I. and Hart, P. (1993). *Research in environmental education: Engaging the debate.* Deakin University Press.

Rorty, R. (1989). *Contingency, irony, and solidarity*. Cambridge University Press.

Rosales, S. (2009). Formación docente y educación ambiental para preescolar. In A. Meixueiro, T. Ramírez, & J. Ruíz. (Eds.), *Educación ambiental en la formación docente en México: resistencia y esperanza* (pp.161-168). Universidad Pedagógica Nacional.

Rose, N. (1999b). *Governing the soul: the shaping of the private self*. Routledge.

Rousseau, J. J. (2006). *Emilio o la Educación*. Berbera Editores S.A. de C.V. (Original work published 1762)

Sauvé, L. (1998) A propos des concepts d'éducation et de responsabilité. In A. Jarnett, B. Jickling, L. Sauvé, A. E. J. Wals., & P. Clarkin (Eds.), *The Future of Environmental Education in a Postmodern World?* (pp. 54-57). Yukon Collage.

Schmitt-Stegmann, A. (1997). *Child development and curriculum in Waldorf education*. Education Resource Information Center. https://eric.ed.gov/?id=ED415990

Schudel, I. (2016). Exploring critical realist insights into transformative environmental learning processes in contexts of social-ecological risk. In L. Price & H.B. Lotz-Sisitka. (Eds.), *Critical realism, environmental learning and social-ecological change* (pp. 254-272). Routledge.

Scott, J. (2000). Children as respondents. In P. Christensen & A. James (Eds.), *Research with children: Perspectives and practices (pp. 98-119)*. Falmer Press.

Scott, S. (2009). *Making sense of everyday life*. Polity Press.

Scott, W. (1999). Environmental Education: Arguing the case for multiple approaches. *Educational studies*, *25*(1), 89-97. https://doi.org/10.1080/03055699997981

Secretaria de Educación Preescolar. (1992). Programa de Educación Preescolar. Fernández editores.

Secretaria de Educación Preescolar. (1992b). *Lecturas de apoyo*. Fernández editores.

Secretaría de Educación Pública & Organización para la Cooperación y el Desarrollo Económicos. (2003). Revisión de las políticas de educación y cuidado de la infancia temprana: Proyecto de Cooperación con la Organización para la Cooperación y el Desarrollo Económicos. http://www.oecd.org/dataoecd/10/38/34429901.pdf

Secretaria de Educación Pública. (2004). *Acuerdo número 348 por el que se determina el Programa de Educación Preescolar*. Diario Oficial de la Federación. https://catalogonacional.gob.mx/FichaRegulacion?regulacionId=31078

Secretaria de Educación Pública. (2004b). *Programa de Educación Preescolar 2004*. Editorial Offset.

Secretaria de Educación Pública. (2011). *Acuerdo número 592 por el que se establece la Articulación de la Educación Básica*. http://www.sep.pue.gob.mx/docentes-y-directivos/item/download/1738_46e20c724076fc7328b6533915c14717

Secretaria de Educación Pública. (2011b). *Programa de estudio 2011 guía para la educadora*. https://www.gob.mx/sep/documentos/programa-de-estudio-2011-guia-para-la-educadora-campos-formativos

Secretaria de Educación Pública. (2015). *Descripción de funciones de la Subsecretaría de Educación Básica*. https://www.gob.mx/sep/acciones-y-programas/subsecretaria-de-educacion-basica#:~:text=En%20el%20marco%20de%20la,establecimiento%20de%20normas%20que%20aseguren

Secretaria de Educación Pública. (2017). *Principales cifras del sistema educativo nacional 2016-2017.* http://fs.planeacion.sep.gob.mx/estadistica_e_indicadores/principales_cifras/principales_cifras_2016_2017_bolsillo.pdf

Secretaría de Gobernación. (1993). *Ley General de Educación*. Diario Oficial de la Federación https://dof.gob.mx/nota_detalle.php?codigo=4759065&fecha=13/07/1993#gsc.tab=0

Secretaría de Gobernación. (2018). *Acuerdo número 11/05/18 por el que se emiten los Lineamientos para el desarrollo y el ejercicio de la autonomía curricular en las escuelas de educación básica del Sistema Educativo Nacional*. Secretaría de Gobernación. Diario Oficial de la Federación https://dof.gob.mx/nota_detalle.php?codigo=5525413&fecha=07/06/2018#gsc.tab=0

SEDETUR. (2018). *¿Cómo Vamos en turismo de Quintana Roo?* Secretaría de Turismo. http://sedeturqroo.gob.mx/ARCHIVOS/como_vamos_enero_octubre_2018.pdf

SEMARNAT. (2006). *La gestión ambiental en México. Secretaría de Medio Ambiente y Recursos Naturales*. https://paot.org.mx/centro/ine-semarnat/Gestion_Ambiental_semarnat06.pdf

SEMARNAT. (2017). *Residuos sólidos urbanos (RSU)*. https://www.gob.mx/semarnat/acciones-y-programas/residuos-solidos-urbanos-rsu

Shiva, V. (2006). *Earth democracy: Justice, sustainability and peace*. Zed Books.

Sinclair, A. (1996). Leadership in administration: Rediscovering a lost discourse. In P. Weller, & G. Davis (Eds.), *New Ideas, Better Government*. Allen and Unwin.

Siraj-Blatchford, J. (2009). Editorial: Education for Sustainable development in early childhood. *International Journal of Early Childhood, 41*(2), 9-22. https://doi.org/10.1007/BF03168875

Siraj-Blatchford, J., Mogharreban, C., & Park, E. (Eds.). (2017). *international research on education for sustainable development in early childhood*. Springer International Publishing.

Siraj-Blatchford, J., Smith, K. C., & Pramling-Samuelsson, I. (2010). *Education for sustainable development in the early years.* Omep World. https://omepworld.org/wp-content/uploads/2021/02/Education_for_Sustainabl_Early_Years.pdf

Sloan, D. (1983). *Insight-Imagination. The emancipation of thought and the modern world*. Greenwood Publishing.

Smith, A., Stirling, A., & Berkhout, F. (2005). The governance of sustainable socio-technical transitions. *Research Policy, 34(*10), 1491-1510, https://doi.org/10.1016/j.respol.2005.07.005.

Smith, K. (2012). Producing governable subjects: Images of childhood old and new. *Childhood, 19* (1), 24-37. https://doi.org/10.1177/0907568211401434

Smith, K. (2014). *The Government of Childhood: Discourse, Power and Subjectivity, Studies in Childhood and Youth.* Palgrave Macmillan.

Smith-Sebasto, J. (2011). A Review of "Young children and the environment: Early education for sustainability". *International Research in Geographical and Environmental Education*, *20*(2), 161-164. https://doi.org/10.1080/10382046.2011.564791

Sobel, D. (1996). *Beyond ecophobia: Reclaiming the heart in nature education*. The Orion Society.

Somerville, M., & Williams, C. (2015). Sustainability education in early childhood: An updated review of research in the field. *Contemporary Issues in Early Childhood*, 16(2), 102–117. https://doi.org/10.1177/1463949115585658

Sorin, R. (2005). Changing images of childhood: Reconceptualising early childhood practice. *International Journal of Transitions in Childhood, 1, 12-21.*

Sorin, R., & Galloway, G. (2005). Constructions of childhood: constructions of self. *Paper presented at the Childhoods 2005 International Conference*, Oslo, Norway.

Spiteri, D. (2015). Experiences of young (minor) asylum seekers in further education in Malta. *International Journal of Lifelong Education*, 34(2), 156-171. https://doi.org/10.1080/02601370.2014.981605

Stake, R. E. (1995). *The art of case study research*. Sage Publications, Inc,

Stake, R.E. (2006). *Multiple case study analysis*. The Guilford Press.

Stanley, B., & Sieber, J. E. (Eds.). (1992). *Social research on children and adolescents: Ethical issues*. Sage Publications, Inc.

Steiner, R. (1988). *The child's changing consciousness and Waldorf education*. Anthroposophic Press.

Steiner, R. (1995). *Waldorf education and anthroposophy.* Anthroposophic Press.

Steiner, R. (1996). *The education of the child and early lectures on education.* Anthroposophic Press.

Steiner, R. (2018). *How to know higher worlds*. Death Authors Society. (Original work published 1918)

Sterling, S. (2004). *Sustainable education: Re-visioning learning and change*. Green Books.

Stevenson, D. L., & Baker, D. P. (1987). The Family-school relation and the child's school performance. *Child Development, 58*(5), 1348–1357. https://doi.org/10.2307/1130626

Stevenson, R. B., Wals, A. E. J., Heimlich, J. E., & Field, E. (2017). Critical environmental education. In A. Russ & M. E. Krasny (Eds.), *Urban Environmental Education Review* (pp. 51–58). Cornell University Press. http://www.jstor.org/stable/10.7591/j.ctt1qv5qhq.9

Stoltz, T., & Weger, U. (2012). Piaget and Steiner: Science and art in the process of formation. *Research on Steiner Education, 3,* 134-145. http://www.rosejourn.com/index.php/rose/article/viewFile/106/131

Taylor, A. (2011). Reconceptualizing the 'nature' of childhood. *Childhood*, 18(4), 420–433. https://doi.org/10.1177/0907568211404951

Taylor, A. (2013). *Reconfiguring the natures of childhood*. Routledge

Taylor, A., & Pacini-Ketchabaw. V. (2015). Learning with children, ants, and worms in the Anthropocene: towards a common world pedagogy of multispecies vulnerability, Pedagogy. *Culture & Society, 23*(4), 507-529. https://doi.org/10.1080/14681366.2015.1039050

Terrón, E. (2004). La educación ambiental en la educación básica, un proyecto inconcluso. *Revista Latinoamericana De Estudios Educativos, 34*(4), 107-164. https://www.redalyc.org/articulo.oa?id=27034404

Terrón, E. (2017). Currículo: Enfoques y experiencias innovadoras con el eje de reflexión educación ambiental. In M. E. Arredondo (Ed.), *¿Qué aprender? ¿Cómo evaluar? Dilemas iberoamericanos* (pp. 118-125). UPN

Terrón, E. (2019). Esbozo de la educación ambiental en el currículum de educación básica en México: una revisión retrospectiva de los planes y programas de estudio. *Revista Latinoamericana de Estudios Educativos, 49*(1), 315-346 https://rlee.ibero.mx/index.php/rlee/article/view/42/183 https://doi.org/10.48102/rlee.2019.49.1.42

Terrón, E., Sánchez, M. S., & Bahena, D. G. (2016). El pensamiento de los jóvenes sobre el cambio climático: el camino pendiente de la educación ambiental. In A. Espejel, & R. Calixto (Eds.), *Educación, jóvenes y ambiente* (pp. 73-101). UAT/UPN

Terrón-Amigón, E., & González-Gaudiano, E. (2009). Representación y medio ambiente en la educación básica en México. *Trayectorias, 11* (28), 58-81. https://www.redalyc.org/articulo.oa?id=60712751005

Teymur, N. (1982). *Environmental discourse: A critical analysis of 'environmentalism' in architecture, planning, design, ecology, social sciences and the media*. Question Press.

The United Nations Educational, Scientific and Cultural Organization. (2019). Framework for the implementation of education for sustainable development (Esd) Beyond 2019. https://www.iau-hesd.net/sites/default/files/documents/unesco_esd2030_framework.pdf

Thornton, L., & Brunton, P. (2007). *Bringing the Reggio approach to your early years practice.* Routledge.

Tikly, L. (2015). What works, for whom, and in what circumstances? Towards a critical realist understanding of learning in international and comparative education. *International Journal of Educational Development*, 40, 237-249.

Tilbury, D. (1995). Environmental education for sustainability: Defining the new focus of environmental education in the 1990s. *Environmental Education Research*, *1*(2), 195–212. https://doi.org/10.1080/1350462950010206

Tisdall, E. K. M, & Punch, S. (2012). Not so 'new'? Looking critically at childhood studies. *Children's Geographies, 10*(3), 249-264. https://doi.org/10.1080/14733285.2012.693376

Tracy, S. J. (2010). Qualitative quality: Eight "big-tent" criteria for excellent qualitative research. *Qualitative Inquiry, 16*(10), 837–851. https://doi.org/10.1177/1077800410383121

Tracy, S.J. & Hinrichs, M.M. (2017). Big tent criteria for qualitative quality. In J. Matthes, C.S. Davis & R.F. Potter (Eds.), *The International Encyclopedia of*

Communication Research Methods (pp. 1-10). John Wiley & Sons, Inc. https://doi-org.libproxy.ucl.ac.uk/10.1002/9781118901731.iecrm0016

Turk, E. (2021). Transgressing National 'Green Culture' and the Moral Authority of Nature in 'Age of the Market' Mongolia. *Inner Asia*, *23*(2), 304-329.

Uhrmacher, B. (2004). Chapter 5: An environment for developing souls: The ideas of Rudolf Steiner. *Counterpoints*, *263*, 97–120. http://www.jstor.org/stable/42978546

Ullrich, H. (1994). Rudolf Steiner (1861-1925). *Prospects: the quarterly review of comparative education, 24*(4), 555-572. https://www.ibe.unesco.org/sites/default/files/steinere.pdf

UNEP. (n.d). Why do forests matter? https://www.unep.org/explore-topics/forests/why-do-forests-matter.

UNESCO. (2012). Shaping the education of tomorrow: 2012 report on the UN decade of education for sustainable development (Abridged). UNESCO Publishing.

UNESCO. (2012b). EFA global monitoring report, 2012: Youth and skills: putting education to work; gender overview. https://unesdoc.unesco.org/ark:/48223/pf0000218569

UNESCO. (2015). *Rethinking education: Towards a global common good?* UNESCO. http://unesdoc.unesco.org/images/0023/002325/232555e.pdf

UNICEF. (2015). *Unless we act now: The impact of climate change on children.* https://www.unicef.org/media/60111/file

UNICEF. (2019). Para cada niño, reimaginemos un mundo major: Informe Anual de UNICEF 2019. https://www.unicef.org/media/71156/file/UNICEF-informe-anual-2019.pdf

United Nations. (1989). Conventions on the rights of the child. http://www.unhchr.ch/html/menu3/b/k2crc.htm

United Nations. (n.d.-a). Decade of action: Ten years to transform our world. https://www.un.org/sustainabledevelopment/decade-of-action/

United Nations. (n.d.-b). Sustainable Development Goals.
https://www.un.org/sustainabledevelopment/education/

Villarroel-Dávila, P. (2015). Recorrido metodológico en educación inicial. *Sophia, Colección de Filosofía de la Educación*, (19), 153-170.
https://www.redalyc.org/articulo.oa?id=441846096008

Von Braun, J. (2017). Children as agents of change for sustainable development. In A. M. Battro, P. Léna, M. Sánchez Sorondo, & J. von Braun (Eds.), *Children and sustainable development: Ecological education in a globalized world (17-33)*. Springer International Publishing.

Walker, C. (2014). *photo elicitation as part of a multi-method research design: Family lives and the environment in Andhra Pradesh, India.* SAGE Publications. https://dx.doi.org/10.4135/9781446273050135127 57

Wals, A. (2017). Sustainability by default: Co-creating care and relationality through early childhood education. *International Journal of Early Childhood, 49*(2), 155-164. https://doi.org/10.1007/s13158-017-0193-5

Weedon, C. (1987). *Feminist practice and poststructural theory*. Blackwell Publishers.

Wilks A., Nyland B., Chancellor B., & Elliot S. (2008). *An analysis of curriculum/learning frameworks for the early years (Birth to Age 8)*. State of Victoria Department of Education and Early Child Development and Victorian Curriculum and Assessment Authority.
http://www.deewr.gov.au/EarlyChildhood/OfficeOfEarlyChildhood/sqs/Docume nts/AnalysisofCurriculum_LearningFrameworksfortheEarly.pdf

Williams, T. P., & Rogers, J. (2016). Rejecting 'the child', embracing 'childhood': Conceptual and methodological considerations for social work research with young people. *International Social Work*, 59(6) pp. 734–744.
http://dx.doi.org/doi:10.1177/0020872814539985

Wilson, M. A. F. (2022). Problematizing child-centeredness: Discourses of control in Waldorf education. *Global Studies of Childhood*, 12(2), 118–133. https://doi-org.libproxy.ucl.ac.uk/10.1177/2043610617707838

Woodhead, M. (2006). Changing perspectives on early childhood: Theory, research and policy. *International Journal of Equity and Innovation in Early Childhood*, 4 (2), 5-48. http://oro.open.ac.uk/6778/

Woodhead, M., & Faulkner, D. (2000). Subjects, objects or participants? Dilemmas of psychological research with children. In P., Christensen, A., James. (Eds.), *Research with Children: Perspectives and Practice* (pp. 9-39). Routledge Falmer.

Woodrow, C. (1999). Revisiting images of the child in early childhood education: Reflections and considerations. *Australian Journal of Early Childhood, 24*(4), 7–12. https://doi.org/10.1177/183693919902400403

Woodrow, C. (2011). Challenging identities: A case for leadership. In L. Miller & C. Cable (Eds.), *Professionalization, leadership and management in the early years* (pp. 29–46). Sage Publications.

Woods, P. A., & Woods, G. J. (2006). In harmony with the child: The Steiner teacher as co-leader in a pedagogical community. *Forum, 48*(3), 217-325.

World Health Organisation. (2012). Our planet, our health, our future; human health and the Rio conventions: Biological diversity, climate change and desertification. https://discovery.ucl.ac.uk/id/eprint/1477192/1/Patz_Our_planet_our_health.pdf

Wright, S. (2000). Why Reggio Emilia doesn't exist: A response to richard Johnson. *Contemporary Issues in Early Childhood*, *1*(2), 223–226. https://doi-org.libproxy.ucl.ac.uk/10.2304/ciec.2000.1.2.10

Yin, R. K. (2014). *Case study research: Design and methods.* Sage.

Zapata, R. (1951). La educación preescolar en México. *Revista Educación 2001, 92.*

Ziörjen, R. (2019). *Economic incentives for recycling in Mexico* [Doctoral dissertation, University of Applied Sciences and Arts Northwestern Switzerland. School of Business].

Zurita, G., Serrano, G., & Tovar, G. (1990). *Nuevas aportaciones para incluir la dimensión ambiental en la educación básica*. SEDUE.

Annex I. Information booklets for participants

El cuidado del medio ambiente en el nivel preescolar en México

Mi nombre es **Adriana Burciaga González**, soy estudiante de doctorado en el Instituto de Educación de University College London (UCL), en Inglaterra y becaria del Consejo Quintanarroense de Ciencia y Tecnología (COQCYT). Por este medio **solicito tu apoyo para realizar mi proyecto de investigación**.

Este folleto contiene más información sobre el proyecto. Te pido amablemente que lo leas.

¡MUCHAS GRACIAS!

UCL Institute of Education

COQCYT CONSEJO QUINTANARROENSE DE CIENCIA Y TECNOLOGÍA

CONACYT Consejo Nacional de Ciencia y Tecnología

¿Cuál es el propósito de la investigación?

El objetivo de esta investigación es analizar **cómo las niñas y los niños construyen su relación con el mundo natural y social que los rodea**. Este proyecto intenta indagar cómo comienzan a comprender algunas problemáticas ambientales y sociales; si están al tanto de lo que está sucediendo y si les interesa.

Asimismo, quiero explorar cómo aprenden a cuidar del medio ambiente, qué tipo de actividades les llaman la atención, cuáles son los principales retos en la práctica y qué puede hacerse al respecto.

También me interesa saber qué piensan sobre esto el **personal académico, los padres y madres de familia** y las personas que como tú, están relacionadas con educación de las niñas y los niños.

¿Cómo puedes colaborar?

Quiero pedir tu apoyo para realizar las siguientes actividades:

- **Observaciones** de grupo.
- **Entrevistas** individuales con el personal de la escuela (titular de grupo, auxiliar de grupo, miembros del equipo multidisciplinario y directivos).
- **Conversar** con algunos niños y algunos de sus familiares/tutores.
- **Actividades con los niños**, por ejemplo, dibujos, fotografías y conversaciones acerca del medio ambiente.

Si me lo permites, quisiera **audio-grabar** las entrevistas y discusiones grupales para después transcribirlas, así como **tomar notas y fotografías** durante las observaciones y actividades. Esto es sólo para documentar lo que sucede y facilitar el proceso de investigación y análisis.

¿Todos tienen que participar?

Tanto tu participación, como la de las demás personas, es **completamente voluntaria**. Antes de llevar a cabo cualquier actividad, cada una de las personas será informada y consultada. Todos los participantes tienen derecho a rechazar la invitación o cambiar de opinión en cualquier momento. De ser así, los datos recabados no serán utilizados y esto no tendrá consecuencias negativas para ti o para tu institución.

¿Cómo se manejará la información recabada?

Toda la información será **confidencial** y se usará solamente para los propósitos establecidos en esta investigación. Los nombres proporcionados, incluyendo los nombres de la instituciones o datos personales no serán revelados; se usarán **seudónimos** para evitar que los participantes sean identificados.

La información obtenida será archivada en un lugar seguro (bajo llave o con contraseña) y la conservaré por tres años después de haber concluido el proyecto. Pasado este tiempo la información original será destruida.

¿Qué sucederá con los resultados de la investigación?

Esta investigación será mi **tesis doctoral**, y al concluirla podré **compartir contigo un reporte** con los resultados. También planeo hacer presentaciones en congresos y revistas académicas.

¿Existen beneficios para los participantes?

Aunque no existen beneficios directos por participar, espero que esta investigación sea una **experiencia de aprendizaje enriquecedora** para todos y que la información recabada ayude a conocer más acerca de la importancia de la educación ambiental durante la etapa preescolar en México. Yo estoy en la mejor disposición para **compartir ideas y conocimientos** con ustedes.

¿Existe algún riesgo al participar?

No existe **ningún riesgo** para los participantes. De cualquier forma tomaré las medidas necesarias para que todos estemos **seguros** y nos sintamos **cómodos** durante el proceso de investigación.

¡Me encantaría que aceptaran participar!

Con su apoyo podremos seguir aprendiendo, y así, contribuir de manera significativa al conocimiento de la educación ambiental y las prácticas de cuidado del medio ambiente en el nivel preescolar en México.

Para mayor información, quedo a tus órdenes:

Institute of Education

UCL

Adriana Burciaga González
PhD candidate
**Institute of Education, University College London
20 Bedford Way, London WC1H**
https://www.ucl.ac.uk/ioe/about

00 000 000

xxxx@xxxxxx

¡GRACIAS!

Annex II. Consent form sample

El cuidado del medio ambiente en preescolar

Hoja de consentimiento para **maestras**

	Sí	No
He comprendido la información acerca de esta investigación.	☐	☐
Acepto participar en esta investigación.	☐	☐
Estoy de acuerdo en que se realicen observaciones de mis clases.	☐	☐
Entiendo que durante las observaciones se tomarán notas y fotos (evitando mostrar rostros).	☐	☐
Acepto participar en entrevistas cuyo contenido será audio-grabado.	☐	☐
Entiendo que mi participación y la de todos los involucrados es voluntaria y que puedo detener la entrevista o la grabación, saltarme preguntas, abandonar el proyecto o las actividades en cualquier momento. Esto no tendrá consecuencias negativas para mí, la institución o el resto de los participantes.	☐	☐
Entiendo que si decido abandonar el proyecto, la información que haya proporcionado no será utilizada.	☐	☐
Entiendo que los datos personales proporcionados serán confidenciales y que los nombres de la escuela y de los participantes serán cambiados para evitar ser identificados en futuras publicaciones o reportes.	☐	☐
Entiendo que los resultados de la investigación podrían ser usados en publicaciones académicas o conferencias.	☐	☐

Nombre: _____

Puesto: _____   Fecha: _____

Grado y grupo: _____

_____   _____
              Firma   **Firma de la investigadora**
                                                 Adriana Burciaga González

¡MUCHAS GRACIAS!
TU COLABORACIÓN SERÁ DE MUCHA AYUDA

Annex III. Interview guideline for teachers

Introduction

1. Tell me a little about you, for how long have you been working here.

Pedagogy

2. Where did you hear about the (name of the approach used in the setting)?
3. What do you think about it? How is it like to work here?

The club (for the City Preschool only)

4. How did the club start and why? What is the purpose?
5. What have been the main challenges?

Concepts

6. Speaking about the environment, what is the environment for you?
7. Have you heard about the term Environmental Education? What does it mean for you?
8. What about the term Education for Sustainability? Are you familiar with it? What does it sound like for you?

Environmental problems

9. What do you think are the main environmental problems now?
10. How do you address these topics at the preschool or with your group?
11. Have you ever heard children talking about these topics? / Have you ever talked to them about it? Why?

Outdoors and nature

12. Is it important for you that children spend time outdoors/bonding with nature?

Images of childhood

13. Do you think children should learn about environmental problems and how to take care of the environment? Why?
14. What would be a good way to teach children about these problems or about taking care of the environment? How do you think children learn best?
15. What is a child for you?

Prompts:

Could you talk more about …? What do you mean by? Could you explain a bit more…? How do you feel about…? When that happen how did you…? Is there something else you would like to add regarding…? So, does that mean that…?

Annex IV. Interview guideline for parents

Introduction

1. Tell me briefly, a little about you and your family: what do you do

Pedagogy

2. Have you heard about the (name of the approach used in the setting)?
3. What do you think about it?
4. Why did you choose this school for your child?

Concepts

5. Speaking about the environment, what is the Environment for you?
6. Have you heard about the term Environmental Education? What does it mean for you?
7. What about the term Education for Sustainability? Are you familiar with it? What does it sound like for you?

Environmental problems

8. What do you think are the main environmental problems now?
9. Do you know if these topics are taught or talked about at the preschool?
10. Have you ever heard your child talking about these topics?/ Have you ever talked to them about it? Why?
11. Do you think children should learn more about it? Why?

Outdoors and nature

12. Is it important for you that your child spends time outdoors/bonding with nature?

Images of childhood

13. What would be a good way to teach children about these problems or about taking care of the environment? How do you think children learn best?
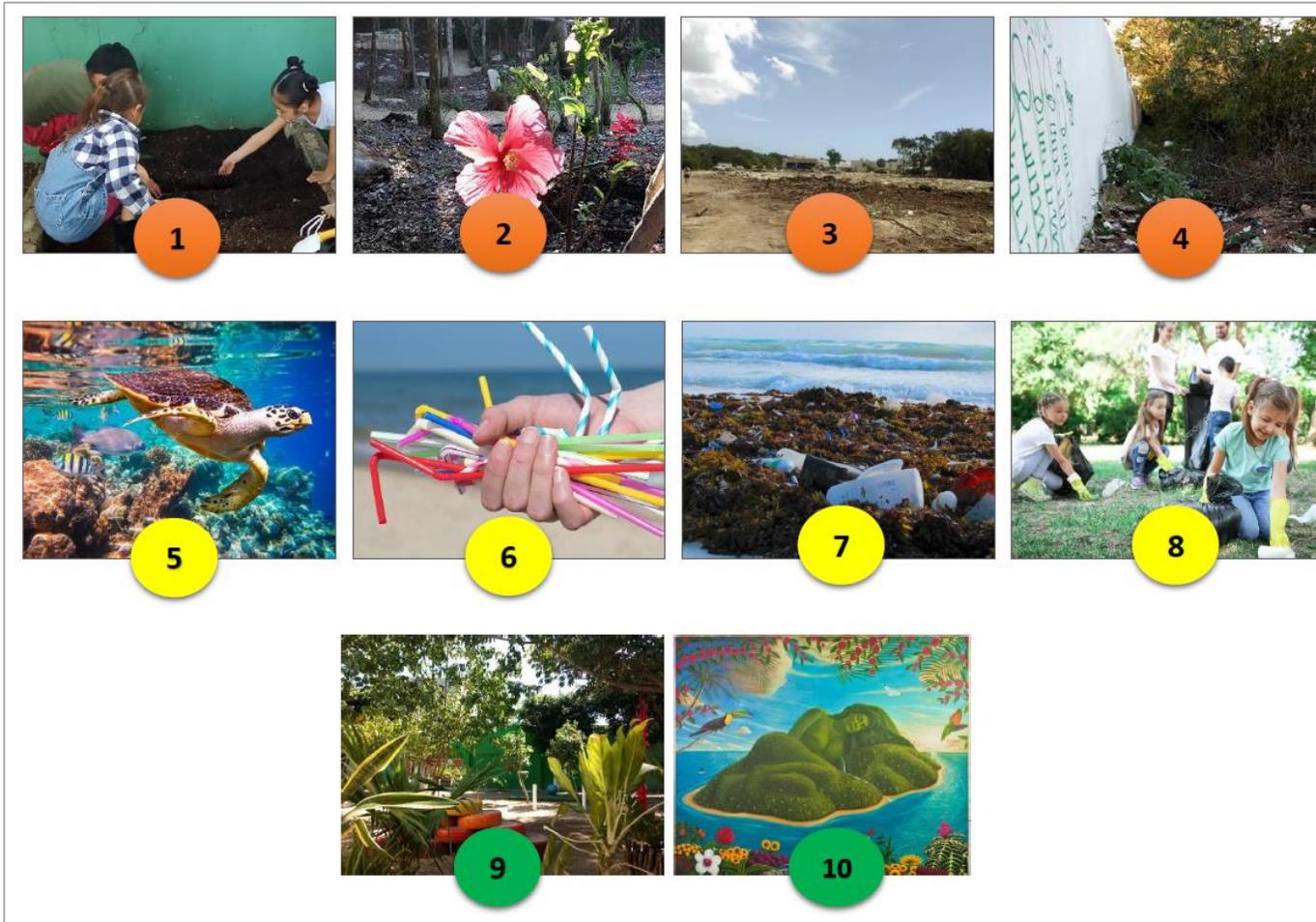14. What is a child for you?

Prompts:

Could you talk more about …? What do you mean by? Could you explain a bit more…? How do you feel about…? When that happen how did you…? Is there something else you would like to add regarding…? So, does that mean that…?

Annex V. Photo elicitation technique introduction

Annex VI. Set of pictures used for the photo elicitation technique with children

Annex VII. Time spent at each preschool

Month	SEPTEMBER				OCTOBER				NOVEMBER				DECEMBER				JANUARY				FEBRUARY				MARCH		
Week	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3
Recruit preschools and participants	█	█	█	█	█	█																					
Observations at the Waldorf preschool					█	█	█	█	█	█	█																
Observations at the City Preschool									█	█	█	█	█	█	H	H	H	*	█	█	█	*	*	█			
Interviews with parents from The Waldorf Preschool															█	█		█									
Interviews with children from the City Preschool																								█	█	█	█

* club/classes were cancelled

H - Holidays

Annex VIII. botany lesson plan elaborated by the teachers

Theme: Botany

First Bimester

Duration	Activities
Session 1	• Establishment of agreements, ways of working • Integration activities, games
Session 2	• club presentation: What is botany? What is this club about? What is a plant?
Session 3	• What is the structure of a plant? • Get to know the life cycle of a plant
Session 4	• Type of plants according to their size • Classification of plants according to fruit or seeds or spores • Classification of plants
Session 5	• The type of care that plants need • Actions that promote the care of a plant • Plants and their usefulness • Reforestation
Session 6	• How to plant • Where the plants live: preparation of the land, delimitation of spaces, etc.

Annex IX. Description of botany club sessions

1) *What is botany*

During the first sessions of the botany club the teachers introduced the club to the children and used pictures and diagrams of plants and trees to explain what botany means and what the club will be about. During the assembly, the teachers encouraged children to share previous knowledge and ask questions. These sessions were led by the teachers and were mainly short lectures, introducing some concepts.

| |
|---|
| **2) *The different types of plants*** |

The following sessions, the teachers gave another short lecture about the different types of plants and asked children to note that there are plants that can have flowers or fruits, some need sun and some need shade, some are big, and some are small. While presenting, the teachers constantly ask questions to children such as what types of plants do you know? Or have you seen something like this and invited children to share their ideas with the rest of the group.

After the lecture, the teachers and the children went around the preschool and playground to observe plants with a magnifying glass. Children then returned to the classroom and teachers ask them to classify plants note the differences in colour and size.

3) *Parts of a plant*

The teachers started the next sessions talking to children about the parts of the plant. They used diagrams and made drawings on the white board.

Children were then asked to go to the small tables and colour in drawings or solve jigsaw puzzles of the parts of the plants. A few minutes before the session was over the teachers went around to see children's drawings and ask them what they have done or what was their picture about and wrote what the child said on the edges of the page.
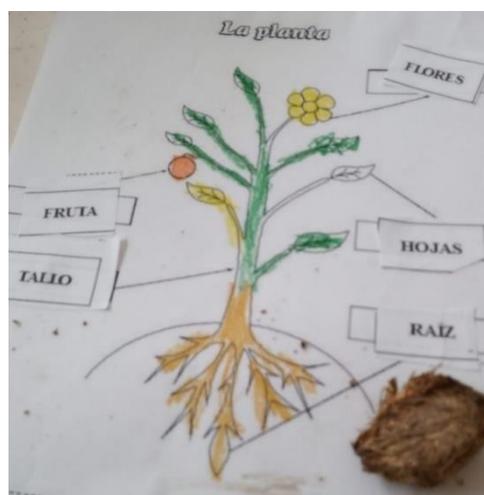
The children then returned to the assembly space inside the classroom and teachers invited children to present to their classmates what they have done.

4) *The life cycle of a plant*

Similar to the previous sessions, the teachers addressed this topic by giving short lectures to explain that plants not only have different parts, but they also grow, develop and die. The teachers employed diagrams to illustrate this process and made emphasis on the fact that plants are alive/ are living beings.

After the short lectures, the teachers invited children to colour in diagrams and then cut and paste it in the right sequence to show how a plant is born, how it develops and then dies.

Next, the teachers invited children to move to assembly space, form a circle and sit on the floor. Then, the teachers ask children who wanted to show what they have done to the group.

Most children raised their hands and the teacher pick some of them and ask them to stand up, show their drawing to others and explain what the diagram was about.
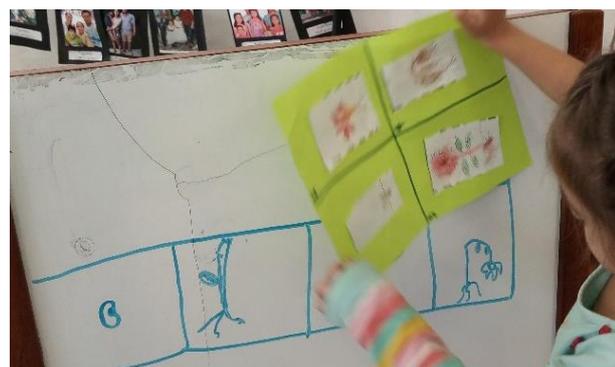
5) *Planting seeds in a cup*

This session did not start with a lecture but with a brief explanation about what children were about to do. Different from previous sessions this activity used a more sensorial and hands-on approach as children were invited to handle real seeds and put them in a cup or a glass.

At the Discoverers group, all children put their seed inside a disposable plastic cup with some cotton and watered, differently, at the Sailor's group some children used either glass cups or biodegradable pot to put their seed and some children used cotton while others used soil. Children took their seed home and the following sessions the teacher asked the children if they had been looking after their plant and what sort of things and changes, they have noticed.

6) *Making "grass heads"*

The session started by explain the children what they were going to do, then move into small groups and created the grass head from scratch. This activity consisted in putting soil inside a stocking foot, then putting a seed and adding water. During this session children were actively helping their classmates.

Once the grass head were ready, they place them outside and the following sessions they kept watering them. Once the grass started to grow, teachers took them to the classroom and invited children to observe the differences. Some of the heads had long grass while others did not have any and others died. Teachers then asked questions such as why you think this is bigger, what could have happened, did it get enough sun, water? etc.

7) *Setting up a botanic garden and creating a small vegetable garden.*

This process included cleaning the space where the plants were placed, creating plant pots by reusing plastic bottles, painting and decorating the space, preparing the soil by removing any rubbish or rocks and finally sowing seeds. This was a process took several sessions.

Up to this stage of the club, both the Discoverers and the Sailors had covered almost the same topics and activities. However, creating the garden and planting seemed to be more challenging for the Discoverers, therefore the teachers decided to create small groups and take only a few children outside at the same time, while the others stayed in the classroom usually with the assistant teacher drawing, cutting or using other materials. Forming small groups meant that the Discoverers group took longer to finalise the garden and therefore, from this point onwards the Discoverers group had different activities from the Sailors group.

8) *Creating lego models of the garden – Discoverers group*

During one of the sessions in which children from the Discoverers group stayed in the classroom with the assistant teacher, she asked children to use Legos to represent how they would like their vegetable garden to look like. The assistant teacher asked children to sit on the tables and distributed the material. During one of my conversations with the assistant teacher she said she had not planned the activity as such ad simply did it to keep the children entertained with a topic related to the botany club while they were waiting to go outside.

9) *Maintaining and protecting the garden*

This stage of the botany club included activities oriented toward keeping the garden in good conditions by watering the plants, keeping the area clean and avoiding stepping on the plants or damaging them. The ways in which teachers invited children to do this was firstly by explaining to them during the assembly that they should look after their garden constantly, after the explanation children went outside to perform these maintenance tasks.

Importantly, teachers told the children that besides from watering and keeping the garden clean they should be aware if they saw children ripping the plants, stepping them or throwing rubbish.

One of activities that emerged within this context at the Sailors group was creating signs so as to prevent others from damaging the plants.

10) Presenting the worked done (assessment)

Every three months children had to present to the rest of the children and parents the activities they been doing during the botany club. This event was organised more as an exhibition, the aim was on the one had that the children could communicate to others what they have learn and other to have a less formal way of presenting evidence the work done. In that sense the presentations were a way of assessing the clubs. This activity took place in the back garden and the first presentation in which children participated included setting a stan to show how to make grass heads. The approach of these presentations was tokenistic in that, the teachers invited or pre-selected some of the children that they thought would like to participate children has to practice a speech and then for the day of the presentation they had to dress in a certain way (pretending to like farmers).

Annex X. Upcycling examples at the City Preschool