



PB403
Societal and Environmental Psychology
Summative Essay

Listening to Nature and Animals: Rethinking Children's Reading Through Ecocentrism

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Introduction

Efforts to address ecological crises have traditionally focused on adult-oriented strategies such as information campaigns, policy nudges, or behaviour-change interventions targeting consumption such as recycling. While these approaches are important, research indicates that traditional knowledge-oriented interventions often fail to generate deep or durable value change (Chater & Loewenstein, 2023). Hence, short-term-sustainability-based interventions may not be as effective as fostering ecocentrism in childhood, a crucial period of development, including the formation of values, mental concepts and worldviews. In this context, ecocentrism is the broadest term for worldviews that recognise intrinsic value in all life and ecosystems, including their abiotic components (Washington H et al., 2017).

Exposing children to ecocentric storybooks targets foundational processes of change by shaping moral frameworks, relational worldviews, and emotional orientations towards the non-human lives, including animals and biodiversity. Early childhood represents a key window during which empathy and emotional connectedness with nature emerge and influence later attitudes; research shows that empathy with nature predicts stronger pro-environmental attitudes in preschool children, and that empathy-enhancing interventions increase environmental concern (Li, Zhao et al., 2024). Although experimental research focusing specifically on farm animals is limited, developmental studies indicate that children readily attribute sentience and engage in perspective-taking towards them, suggesting that narrative approaches can foster compassion toward animals used in agriculture and wildlife (Burich & Williams, 2020). Further evidence shows that early engagement with animals and natural environments predicts later responsible environmental values and behaviours, supporting the role of early emotional engagement in sustained ecological concern (Barrable, 2019). Therefore, narrative-based approaches that portray animals as sentient beings, and nature (including animals) as intrinsically valuable can make ecological concepts meaningful in ways that information-based strategies cannot. By positioning humans as part of interconnected ecological and animal communities rather than dominant over them, ecocentric storybooks offer a preventive, long-term pathway to cultivating enduring ecological identities and compassionate orientations.

Literature Review

Early childhood is a crucial period for the formation of values and moral reasoning (Ernst et al., 2021). During these years, children begin to construct understandings of nature and develop emotional attachments to living beings. Research indicates that experiences with nature and exposure to environmental themes through storytelling can influence pro-environmental identity and long-term ecological behaviours (Altun, 2020; Ernst et al., 2021). Within this developmental window, adopting an ecocentric worldview that recognises the intrinsic value of life rather than prioritising human needs becomes foundational for sustainable thinking (Altun, 2020).

Storybooks are perceived as an effective tool for moral and emotional learning (Nath, 2023). Through imaginative narratives, they enable children to empathise with non-human characters and perceive the interdependence between humans and nature (Altun, 2020). Studies show that when ecological concepts are presented through relatable storylines, children are more likely to internalise environmental care as a moral value (Nath, 2023). For instance, Altun (2020) found that preschoolers who displayed higher perspective-taking abilities equally showed stronger ecocentric reasoning in ecological dilemmas. Therefore, storybooks offer a pathway for cultivating ecological empathy that goes beyond technical knowledge of conservation.

Despite this potential, most mainstream children's books remain anthropocentric, portraying nature as a passive background, a resource for human use (Nath, 2023). This limits children's opportunities to perceive nature as a moral subject deserving of respect and protection (Altun, 2020). Genuine ecological education requires shifting from anthropocentrism to ecocentrism, in which children recognise the moral worth of all species and ecosystems. When storybooks portray natural systems as possessing agency, they adopt ecological morality, a behaviour norm rooted in coexistence and mutual care (Yunfei, 2021).

Parental involvement significantly amplifies the impact of environmental storybooks (Iwaniec et al., 2020). Shared reading sessions allow parents to mediate story content, initiate discussions about ecological themes, and model empathy for nature (Iwaniec et al., 2020). Research indicates that children are more likely to translate story-based environmental messages into behaviour when their parents engage in related dialogue or activities (Nath, 2023; Iwaniec et al., 2020). Nonetheless, an-Oxford University Press (2021) survey found that 63% of UK

parents preferred reading classical books, with few accessing new sustainability-themed titles. This suggests a significant gap in parental awareness and access to ecocentric materials.

Educational systems also play an essential role in embedding ecocentrism within structured curriculum. Early-years sustainability education is most effective when it integrates nature play, reflective storytelling, and emotional engagement (Ernst et al., 2021). Nevertheless, education in schools often remains limited to scientific facts, neglecting the affective and ethical dimensions of ecological awareness. Generally, much of humane-education research still includes pets or “animal-assisted” components, some of which risk instrumentalising animals. Embedding storybooks within literacy and social-emotional learning frameworks can help bridge this gap, encouraging empathy and moral reasoning consistent with ecocentric ethics (Altun, 2020).

In summary, educational institutions further reinforce values when they adopt integrative, story-based approaches (Yalçın, 2021). Yet, the lack of accessible ecocentric storybooks and limited parental engagement indicate an ongoing need for innovative, research-informed materials that unite narrative learning, family participation, and ecological ethics (Nath, 2023).

Stakeholder Analysis



Figure 1. Stakeholder Analysis Map.

Children

Children are the primary recipients and participants. They engage with narratives, characters, and moral worlds that shape early cognitive, emotional, and ethical development. While they are not exactly decision makers in the design or implementation of our interventions, they are the most directly affected stakeholder group.

According to the National Literacy Trust, 3 in 5 (62.6%) children ages 5 to 8 enjoy reading. Precisely, motivations fall into three broad categories: curious (learning-focused), mindful (wellbeing-focused), and social (connection-focused). Curious motivations remain the strongest across all levels of enjoyment, especially among those less enthusiastic about reading (National Literacy Trust, 2025).

Providing children with autonomy through book choice and personalised content has been found to increase intrinsic motivation and reading-for-pleasure behaviours (Kucirkova, 2017; Kucirkova & Cremin, 2020). Storybooks that invite imagination further promote sustained engagement, especially through visuals, enactment, and emotional connection, such as featuring relatable characters or opportunities for role-play (Grolig et al., 2019; Strouse et al., 2018). Furthermore, digital storybooks and multimedia e-books can enhance motivation and attention, wherein interactive features are meaningfully integrated and accompanied by adult scaffolding. Although poorly designed interactivity may distract children and reduce comprehension (Savva et al., 2022; Kucirkova, 2017).

Parents

Young children's parents and caregivers are the primary stakeholders in our interventions, as they act as gatekeepers to children's early literacy environments and value-formation processes. Parenting decisions and the family environment correlate with long-run outcomes (Doepke et al., 2024). Parents are the primary influence in early childhood, especially when the decision-making occurs. A report by BookTrust (2024) states that children are more likely to have access to books through their parents' library membership, their personal preferences for books, and a regular encouragement by parents or carers to read. However, parents face structural and cognitive barriers when selecting storybooks aligned with ecocentric values. According to the findings from field research, current book classification systems in libraries and bookshops are

largely organised by age or format rather than by thematic or moral content, often directly conflicting, making it challenging for parents to identify books that reflect specific values such as environmental stewardship or animal respect (Appendix A). Empirical research further supports this challenge, showing that parents often rely on heuristics such as familiarity, recommendations, or nostalgia when selecting books, rather than thematic alignment (Kucirkova & Cremin, 2020). This mismatch creates friction between parents' intentions and their actual purchasing or borrowing behaviour. Furthermore, community influence has shown a direct role in shaping parents' role in decision making Đurišić et al. (2017). Therefore, parents' motivations, constraints, and social contexts directly shape whether ecocentric storybooks succeed in fostering early ecological empathy and moral reasoning.

Educational Institutions

Educational settings are essential for scaling ecocentric narratives beyond individual households and embedding them into everyday pedagogical practice. Educators are motivated by curricular alignment, legitimacy, and institutional accountability. Early childhood and primary educators operate under tightly regulated curriculum a that prioritise developmental appropriateness, inclusivity, and safeguarding, which shape how ethical values can be introduced.

Teachers are more willing to engage with ethical topics when these are framed through storytelling, empathy-building, and inquiry rather than explicit moral instruction (Taylor, 2017). Therefore, storybooks offer a culturally legitimate and developmentally appropriate technique for introducing ecocentric ideas without triggering institutional resistance.

Early childhood education (ages 3–8) is a sensitive period for the development of empathy, moral concern, and categorisation processes, including the differentiation between humans and nonhuman animals (Kahn & Kellert, 2002; Melson, 2023). Empirical work demonstrates that early exposure to narratives that challenge human exceptionalism by portraying animals and nature as sentient, agentic beings can reduce speciesist bias and foster broader moral concern (Myers, 1997; Cole & Stewart, 2014). Our field research suggests that educators often seek resources that support social–emotional learning (SEL) outcomes, which position ecocentric storybooks as aligned with existing SEL priorities rather than as an additional burden.

At the school level, teachers' capacity to implement interventions is moderated by training, confidence, and institutional support. Leadership priorities, inspection frameworks, and reputational risk shape decisions. While sustainability education is increasingly institutionalised through global frameworks such as Education for Sustainable Development (ESD), explicit attention to animal ethics and anti-speciesism remains marginal and sometimes perceived as controversial (Kopnina, 2020). Scholars argue that this omission reflects a broader 'anthropocentric bias' in sustainability education, in which environmental protection is prioritised while the moral status of animals is ignored (Kopnina et al., 2018). Ecocentric storybooks that integrate environmental and animal ethics can therefore serve as low-risk entry points for schools to address these blind spots without overtly politicising classroom practice.

Additionally, schools and early-years institutions function as sites of social normalisation. Research on moral education indicates that values are more likely to be internalised when they are embedded in everyday routines, visual environments, and institutional narratives, rather than delivered as isolated lessons (Nucci, 2001).

Government and NGOs

Government bodies such as the Department for Education and Environmental and Animal Protection NGOs play a key role in providing institutional legitimacy and normative guidance in this project. As the intervention involves children, value formation, and environmental ethics, these are socially sensitive areas. Without credible institutional endorsement, the promotion of ecocentric storybooks could be questioned as value imposition. The involvement of the government and NGOs, therefore, helps to reduce potential controversy and strengthen public trust.

In the UK context, many environmental and animal protection NGOs have long engaged in educational and public awareness initiatives (Muldoon & Williams, 2021). At the same time, existing research has noted that environmental education policy remains limited and often emphasises "education about the environment" rather than "education for the environment" (Glackin & King, 2020).

In this intervention, government bodies and NGOs are not positioned as primary target stakeholders. Instead, they serve as supporting actors, providing legitimacy and guidance. Their role is to contribute to the definition of ecocentric principles and to inform the value-based

labelling system. This helps ensure alignment with existing environmental education goals and avoids conflicts with established educational norms.

Publishers, Authors, and Illustrators

Publishers, authors, and illustrators play a leading role in shaping children's storybooks. In current publishing markets, ecocentric storybooks are often regarded as niche products, and uncertain market returns increase publishers' perceived risk (Tasnim, 2024). Authors and illustrators may also worry that value-based labelling could constrain creative freedom (Tasnim, 2024). These concerns represent structural constraints that must be acknowledged.

This intervention does not require creators to alter their content. Instead, it focuses on changing how content is discovered and understood. The value-oriented labelling system improves the visibility of ecocentric narratives and allows families with relevant interests to identify them more easily. User reviews and reading preferences provide publishers with clearer feedback on which ecological themes resonate with families. This reduces uncertainty in future content production.

The EcoTales co-creation tool is positioned as a creative experience rather than a substitute for professional authorship. Its purpose is to help families translate ecocentric values into personalised storybooks. EcoTales only generates ecocentric stories and does not replace the full range of children's literature. It exists solely in an online format. Given the limitations of AI creativity, this tool is not expected to undermine the professional role of authors and illustrators, nor to generate strong resistance from creators.

Bookstores and Libraries

Bookstores and libraries are key stakeholders in this project. Public libraries often carry educational and sustainability-related responsibilities that closely align with promoting ecological awareness. Independent bookstores often build their cultural identity through careful curation. For both actors, initiatives that increase reader engagement without significantly increasing operational burden are attractive.

The value-based labelling system in our intervention is designed as an additive rather than a disruptive layer. Stickers and QR codes do not replace existing classification systems but provide an additional, visible cue to ecological meaning. The digital platform further connects

families directly to bookstores and libraries, making book access easier. Through this intervention, bookstores and libraries gain increased visibility and engagement, while readers benefit from clearer guidance and improved access to ecocentric storybooks.

Activity Theory

To understand parents' journeys when purchasing storybooks for their children, we applied a simplified version of Activity Theory (Lahlou, 2018) to develop an activity map (Appendix C). Activity Theory explains human behaviour as a goal-directed activity shaped by tools, competences, and social rules, rather than by individual intention alone. This map traces parents' book-purchasing behaviour from the initial state to a defined goal, passing through four intermediate sub-goals.

Based on this mapping process, we identified a set of key pain points that parents encounter throughout the storybook purchasing and reading journey. These include: (1) uncertainty about which books are appropriate for children at a given developmental stage; (2) difficulty in using reading activities to support the development of children's competencies; (3) social pressure from other parents regarding what children should read; (4) difficulty in locating books that align with parents' values and preferences; (5) challenges in physically locating the desired books; (6) concerns about keeping book purchases within budget; (7) uncertainty about whether children can understand the content of the books; and (8) difficulty in sustaining children's interest and motivation to read. Together, these identified pain points directly informed the design of our intervention.

Our Approach: Intervention Design

Following the analysis of parents' buying behaviour and the identification of the pain points they face, we conducted primary research to complement our understanding of the habits around acquiring and reading storybooks for children.

In a survey targeting a London-based parent community which consists of approximately 40 people, 12 respondents completed a series of questions about their book purchasing and borrowing habits. Consequently, the primary and secondary data informed our intervention design, leading to the development of three approaches: Storybook labelling, the EcoTales webpage, and the EcoTales application.

Reimagining Children's Book Classifications

The survey revealed a significant disconnect between current book categorisation systems and user needs. When asked to rate the effectiveness of current book labelling for children's storybooks across bookshops, local libraries, and online retailers, the results were inconsistent. Precisely, there was no clear consent on how categorisation was done, indicating an opportunity for improvement (Figure 2).

On a scale of 1-10, how would you rate the current book labelling/ categorisation for children's storybooks in places including bookshops, local libraries, online retailers?

12 respuestas

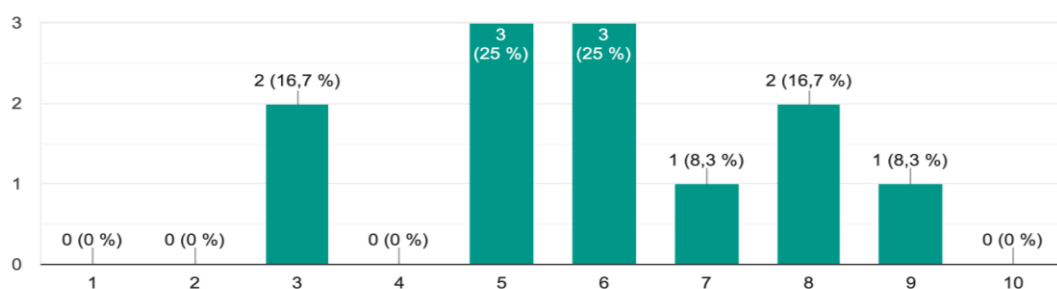


Figure 2. "How would you rate the current book labelling for storybooks?"

These findings align with the qualitative inquiry, particularly insights from the informal conversations conducted with parents, public libraries, and nurseries. For instance, one common theme discussed was that traditional classification systems, typically organised by age bands, did not reflect how adults actually search for children's books. Parents and educators reported struggling to find books that address specific themes, such as managing emotions, celebrating diversity, and addressing situational contexts that matter in children's lives.

The current taxonomy treats children's books as educational products defined by complexity rather than as tools for connection, learning, and emotional development. Age-based categorisation assumes homogeneity in children's experiences and interests, while genre-based systems often obscure the deeper themes and values that stakeholders prioritise when selecting books.

Stakeholders require classification systems that transcend age-based categorisation, incorporating thematic content (nature-based stories, emotional literacy, family diversity,

cultural representation), situational relevance (bedtime reading, narratives about change or loss), pedagogical values (growth mindset, empathy-building), inclusivity markers, and interactive features. Such multidimensional frameworks would enable more intentional book selection aligned with children's developmental needs and family values.

Value-Based Labelling Through Community Activism

In response to the identified pain points, our first intervention is community-driven and reimagines book classification while simultaneously building environmental consciousness and engagement. This approach is centred on book labelling sessions, in which volunteer climate activists who are passionate about nature conservation visit community libraries to label children's books using value-based taxonomies.

A pilot implementation at Goodenough College demonstrated the feasibility of this approach. Precisely, volunteer parents successfully labelled books and engaged with the QR tracking system (Appendix B). This strategy transformed book classification from an administrative task into an act of civic participation, environmental activism, and community building, while solving the practical problem of helping families find the stories that matter the most.

Storybooks Website Application

Our second intervention is the Storybooks WebApp (MVP link: <https://storytrack-fj6eijmk.manus.space/>). Storybooks is an innovative digital platform designed to help parents, caregivers, and educators track children's reading habits while discovering books aligned with specific educational values. The platform combines physical book sharing with digital tracking via QR codes, creating a unique, community-driven reading ecosystem for children aged 0-8.



Figure 3. The QR Code to Storybooks WebApp.

Storybooks addresses a critical challenge in early childhood education, specifically helping parents discover and track storybooks that align with their values while fostering a sense of community through children's literature. The platform transforms reading from an isolated activity into a shared journey, where books travel through neighbourhoods and families can see the impact of stories across the community.

The QR code feature allows you to scan a unique sticker placed on each book and log in the storybooks you read. In turn, this creates a seamless tracking experience that requires minimal effort. The value-based discovery engine enables parents to filter books by educational values, such as empathy, courage, environmental awareness, ensuring that every story aligns with their parenting philosophy.

The mapping feature visualises the 'journey' of books through London boroughs, creating a compelling narrative of how stories move through communities. Parents and kids can view a complete path a book has taken, including the distance travelled, the neighbourhoods visited, and the number of families who have read it before. The borough-based filtering system allows users to discover books popular in their local area or explore reading trends across different London communities.

The platform includes book comparison tools that let parents evaluate various books based on values, age, and community ratings. A personal reading library tracks each family's reading history, providing statistics on books read and values explored. The community feature allows parents to create and share curated book lists and reviews, and to follow other families' recommendations.

The Storybooks WebApp intervention acts in two specific moments of parental activities. We aim to channel their behaviour by adding a solution in a place where parents are normally alone. Precisely, the process of cultivating children's reading habits involves two critical stages: identifying appropriate literature and embedding reading into established family routines, such as bedtime storytelling, followed by opportunities for children to share their reading experiences.

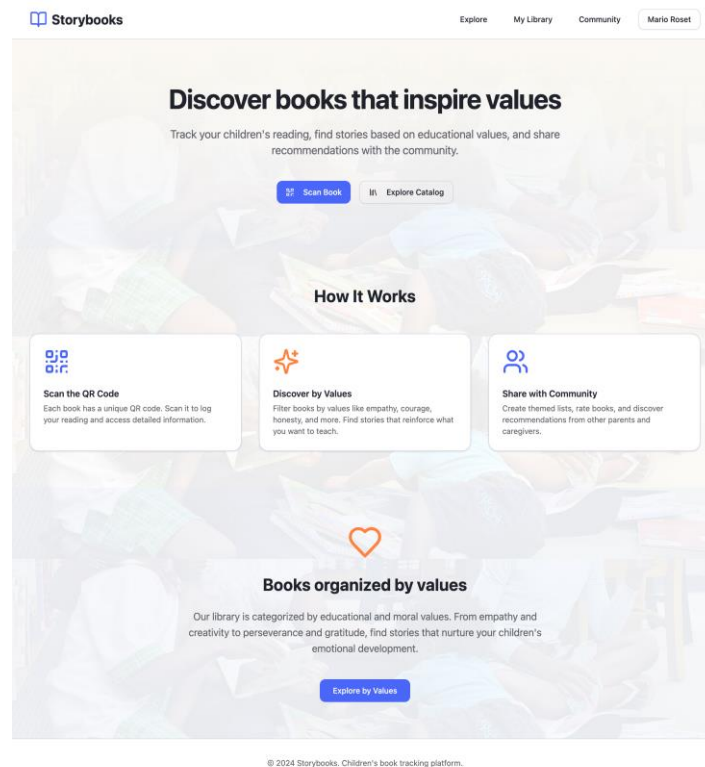


Figure 4. The Website Ecosystem of the Storybooks WebApp.

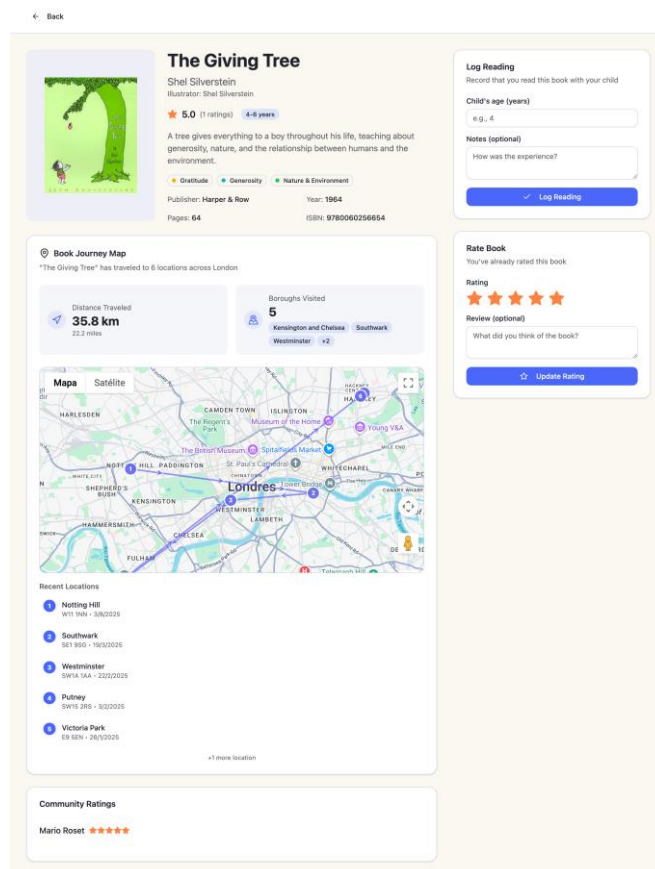


Figure 5. Storybooks WebApp Features: Book Journey Map, Ratings, Reading Log.

Our survey findings reveal that parents use multiple channels to discover books. Physical spaces, specifically libraries and bookshops, emerged as the primary source for 57.5% of respondents (Figure 6). Nonetheless, recommendations proved influential, with 33.3% indicating a reliance on this informal channel for book selection.



Figure 6. Survey Results to “Where do you usually discover new storybooks for your child?”

The first proposed intervention targets the recommendation ecosystem specifically, while simultaneously partnering with existing institutional infrastructures—libraries and bookshops—to amplify reach and accessibility.

EcoTales: AI-Powered Co-Creation of Ecocentric Storybooks

Our third intervention is EcoTales, an AI-assisted storybook generation application (MVP link: <https://ecotales-1036209014465.us-west1.run.app/>). Through the app, parents and children can together give creative story elements to an AI-assistant, including the setting, a challenge or conflict, character ideas, and the values they wish the story to explore. The AI then generates a fully illustrated ten-page storybook, accompanied by natural white noises and soft background music.

Regardless of the specific elements provided by users, the system is designed to ensure that non-human entities always serve as the narrative protagonists. Stories are told from the perspectives of rivers, forests, birds, coral reefs, or other non-human beings, granting them narrative voice and agency. This design choice reflects the core principles of ecocentrism,

which emphasise that nature possesses intrinsic value, wisdom, and agency independent of human interests.

The ten-page format was carefully selected. It is short enough to fit within a single bedtime reading session, yet long enough to develop a meaningful narrative structure. The design also accounts for children's limited attention spans (Betts et al., 2006) by combining brief text, rich illustrations, and auditory elements to sustain engagement.

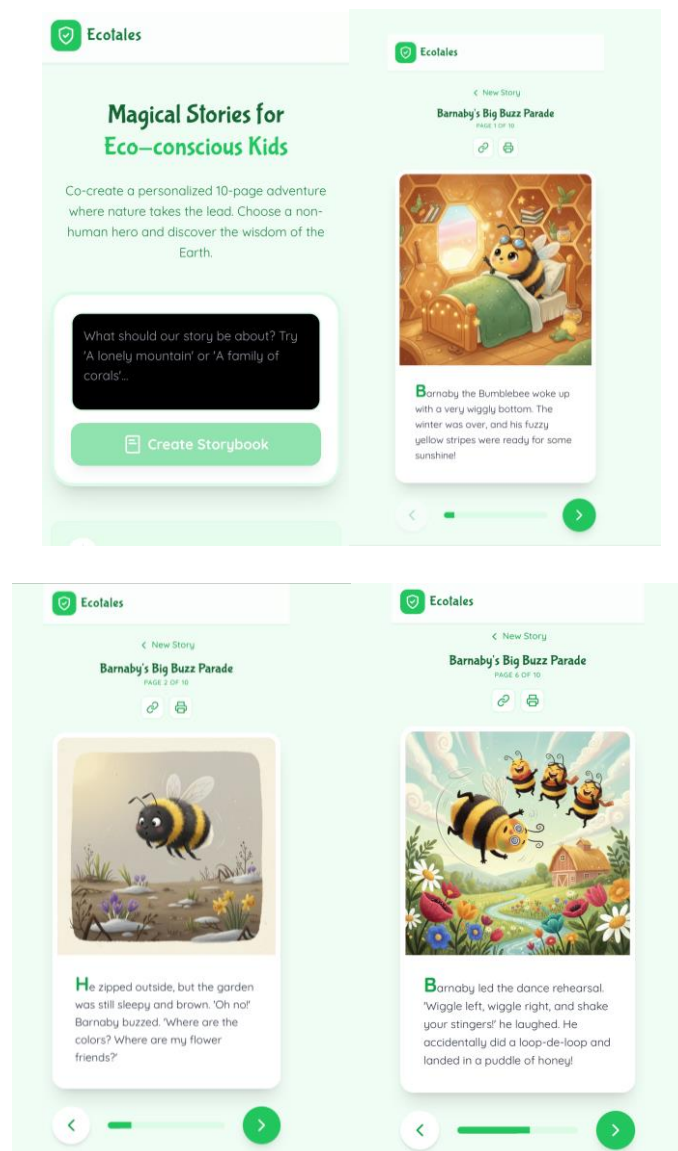


Figure 7. EcoTales Application Interface.

The design of this intervention was also informed by findings from our questionnaire study. One parent noted that *“On my experience, the most important thing to deliver the nature or environmental stories effectively to kids is “FUN” and “CUTE”. When we are so serious, kids will run away!”* This insight led to a key conclusion: children's storybooks must be engaging

and enjoyable to attract young readers, rather than being too serious when introducing environmental issues. Through personalised creative visualisation, EcoTales aims to encourage both children and parents to engage with stories that convey ecocentric values in an accessible and appealing way.

Please indicate your alignment with the following statement: Nature- and animal species-focused storybooks are sometimes too educational rather than fun.

12 respuestas

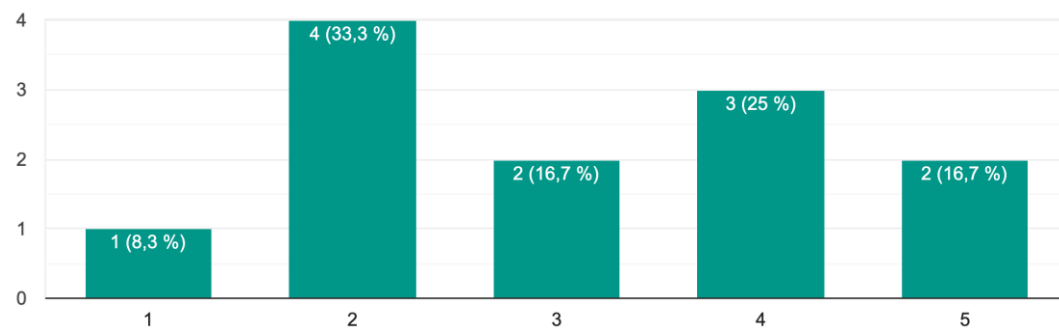


Figure 8. Alignment on Nature Storybooks as Educational.

To maximise the outreach and engagement with the target audience, this project adopts a multi-channel dissemination strategy by placing promotional materials in locations where parents, caregivers, and young children naturally gather.

The main dissemination channels include:

(1) **Paediatric waiting rooms**, where families often spend extended periods of time and are more receptive to child-focused content. Healthcare environments are widely regarded as trusted spaces for the dissemination of parenting and educational resources (Glanz et al., 2015). In addition, paediatric waiting rooms benefit from engaging materials that can capture children's attention and help distract them from the fear often associated with medical visits.

(2) **Public transportation systems**, particularly London Underground stations serving family-dense neighbourhoods. The high volume of people passing by can increase the visibility of the poster. Funding for placements in these locations may be supported by partnerships with environmental and animal protection NGOs.

(3) **Areas surrounding educational institutions**, such as primary schools and nurseries during drop-off and pick-up times. These locations attract concentrated groups of parents and children, who are the core target audience of this intervention. Schools may also benefit from promoting environmental interventions, as such initiatives contribute to a public reputation of environmental responsibility and care.

All promotional materials will include QR codes that link directly to the EcoTales application, reducing access barriers and enabling immediate engagement. By integrating digital access points through QR codes with physical promotional materials, the intervention creates a smooth transition from awareness to participation. The figure below presents a prototype promotional poster designed for paediatric settings. The poster features the tagline “EcoTales: AI-Powered Story Creator,” incorporates child-friendly visual elements, and prominently displays a QR code.



Figure 9. Prototype for Promotional Materials.

Installation Theory

Following the introduction of our interventions, this section examines how this design operates through the three layers of Installation Theory. Installation Theory explains how behaviour is shaped and sustained through the coordinated interaction of material environments, embodied competencies, and social regulations (Lahlou, 2018).

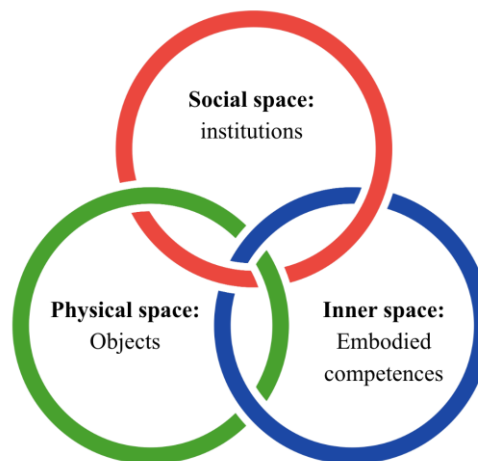


Figure 10. Installation Theory Map.

Material Affordances

The material layer refers to the physical environment and its tangible components, including infrastructure, objects, and spatial arrangements. These elements provide concrete affordances that guide possible actions by constraining or supporting behaviour (Lahlou, 2017).

At the material level, the interventions influence parental choice by restructuring both the physical and digital environments in which parents search for and engage with children's storybooks. Research suggests that options requiring lower cognitive effort are more likely to be chosen during decision-making processes (Garbarino & Edell, 1997).

In physical libraries and bookstores, stickers and QR codes increase the visual salience of ecocentric storybooks, allowing them to stand out on shelves. This way, the intervention reduces the cognitive effort required for parents to identify value-aligned books and directs attention towards ecocentric narratives when presenting with choice. At the digital level, the storybook webpage transforms a complex and time-consuming search process into an intuitive

classification system. Within this system, ecocentric storybooks are positioned as the default and most visible category. As a result, ecocentric choices are not framed as morally superior, but as materially easier to make.

The EcoTales application further extends the material layer by translating abstract values into tangible story forms. Through guided story creation, ecocentric ideas are embedded in concrete storybooks. These tools can increase engagement and can also shape behaviour by influencing which types of stories can be easily created and consumed within everyday family reading practices.

Embodied Competencies

The embodied layer refers to individuals' internal capacities, including learned skills, acquired knowledge, habits, and cognitive processes. These embodied competencies enable individuals to interact effectively with their environment and perform appropriate behaviours (Lahlou, 2018).

In this intervention, parents and children are not assumed to initially possess the expertise required to identify or articulate ecocentric values (Cocks & Simpson, 2015). Instead, these embodied competencies are developed gradually through repeated exposure to the system.

As parents repeatedly encounter labelled ecocentric storybooks in both physical and digital contexts, they might begin to recognise recurring narrative patterns, themes, and perspectives associated with ecocentrism. Over time, parents may develop a growing interest in ideas related to respect for nature. Importantly, this learning process does not rely on explicit instruction or persuasion. Serious persuasive attempts are often perceived as external threats to individual freedom and may lead to “boomerang effects,” where people move away from the promoted behaviour or position (Fransen, Smit, & Verlegh, 2015). In contrast, learning in this intervention emerges through practice shaped by the installation itself, thereby reducing the likelihood of such effects.

The EcoTales co-creation tool further strengthens embodied competencies. Research indicates that AI-supported visual applications can enhance intrinsic motivation for story creation and foster more positive attitudes towards writing (Kaskaya & Ates, 2025). By enabling parents to participate in storytelling without requiring advanced narrative skills, the tool significantly lowers the threshold for engagement. Through repeated visualisation and guided creation,

EcoTales helps parents to grasp the value of ecocentrism and to build confidence in facilitating value-related discussions during reading, allowing these practices to become naturally integrated into everyday family life.

Social Regulations

The social layer refers to institutional frameworks, social norms, and regulatory mechanisms that provide external guidance and control over behaviour. This layer defines expected roles, acceptable actions, and shared understandings that ensure coordinated social interaction and compliance within an installation (Lahlou, 2018).

At the social level, this intervention encourages parental acceptance of ecocentric storybooks through the combined effects of institutional endorsement and community visibility. When libraries have ecocentric storybooks labelled and displayed, they communicate a signal of institutional approval (Baldaquí-Escandell & Lluch, 2024). This positions such books as appropriate, credible, and aligned with existing educational goals. In public or shared settings, these signals can significantly reduce the psychological risk that parents perceive when making value-oriented choices.

Research shows that the exchange of information, opinions, and recommendations among readers can influence both book sales and borrowing rates (Amblee & Bui, 2011; Huang & Yang, 2010). Such social recognition has a strong impact on demand. In this intervention, user reviews, shared reading experiences, and QR-code-based participation records gradually make ecocentric reading a visible social practice. Together, these social cues serve as proof, indicating that ecocentric storytelling is a recognised and socially supported parenting practice.

As these signals continue to accumulate, ecocentric reading becomes embedded within shared social norms of responsible and socially recognised parenting. This process supports the long-term continuation of the behaviour.

Discussion and Limitations

This project is based on a limited empirical sample of 12 caregivers from a 40-member community in central London (30% response rate). Respondents are predominantly MSc students or PhD candidates, with the vast majority being international migrants. This socio-demographic profile limits generalisability to wider London parent populations. Further research would be required before scaling the proposed interventions across London's highly multicultural contexts.

Furthermore, our study did not address parental alignment with ecocentric values - a critical factor in children's environmental worldviews due to logistic constraints. The informal conversations with community parents and a local Camden nursery (Coram's Fields Centre) provided valuable contextual insights but lacked systematic methodological rigour and could not be generalised beyond specific cases.

The project's scope precluded user testing of our digital prototypes. We recognise the distinction between reported utility and actual engagement. The future research should include pilot testing to empirically evaluate usability, adoption, and impact.

We acknowledge tensions in proposing EcoTales given AI's environmental footprint. However, we argue this specific application's marginal environmental cost is outweighed by its potential educational benefits.

Finally, our focus on parents as the primary stakeholder meant we could not collect in-depth data from librarians, bookstore owners, authors, and publishers, the key actors in the children's literature ecosystem who should be engaged in future research.

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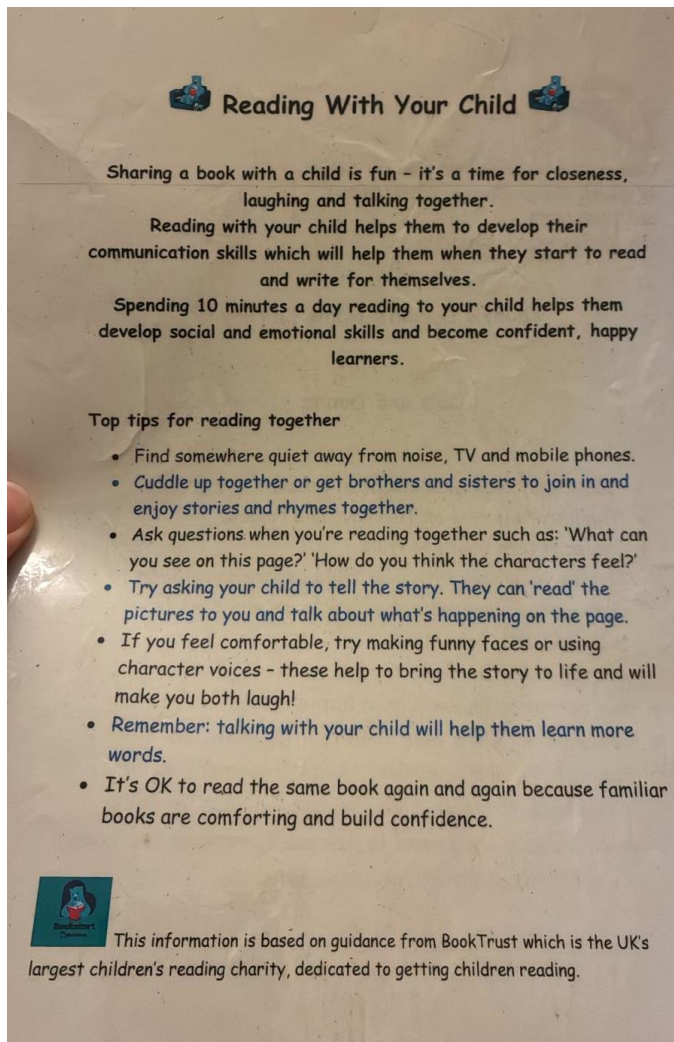
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Although such books are present in shops and are positioned on the height level of a child making it accessible to reach, based on our data analysis and conversations with parents, it is time consuming and inherently challenging to pick the “right” publication that aligns with ecocentric values unless the parent enters a store with a specific book in mind, has a favourite author, is planning to buy a book from their childhood or has recommendations from their friends or family.

Another two visits to the field were mapped, as shown in the following pictures, Barbican Library, and Tate Modern Bookstore, showing the same pattern of categorization only by age.



Two field visits were conducted at Coram Centre Nursery (Camden) with the purpose of gathering contextual and institutional perspectives on early childhood reading practices. During these visits, informal conversations were held with teaching staff and members of the nursery team, allowing the research to capture insights from the viewpoint of practitioners and the institution rather than solely from parents. These interactions provided qualitative, practice-based observations regarding how nurseries engage families around reading and storytelling. As part of this institutional exploration, the nursery shared examples of existing collaborations with external organizations, including BookTrust, the largest reading charity in the United Kingdom. BookTrust works closely with nurseries to promote early literacy and provides guidance to parents on how to read with their children at home. One such example of this collaboration, as referenced by the nursery staff, is presented below to illustrate current institutional practices and partnerships relevant to this study.



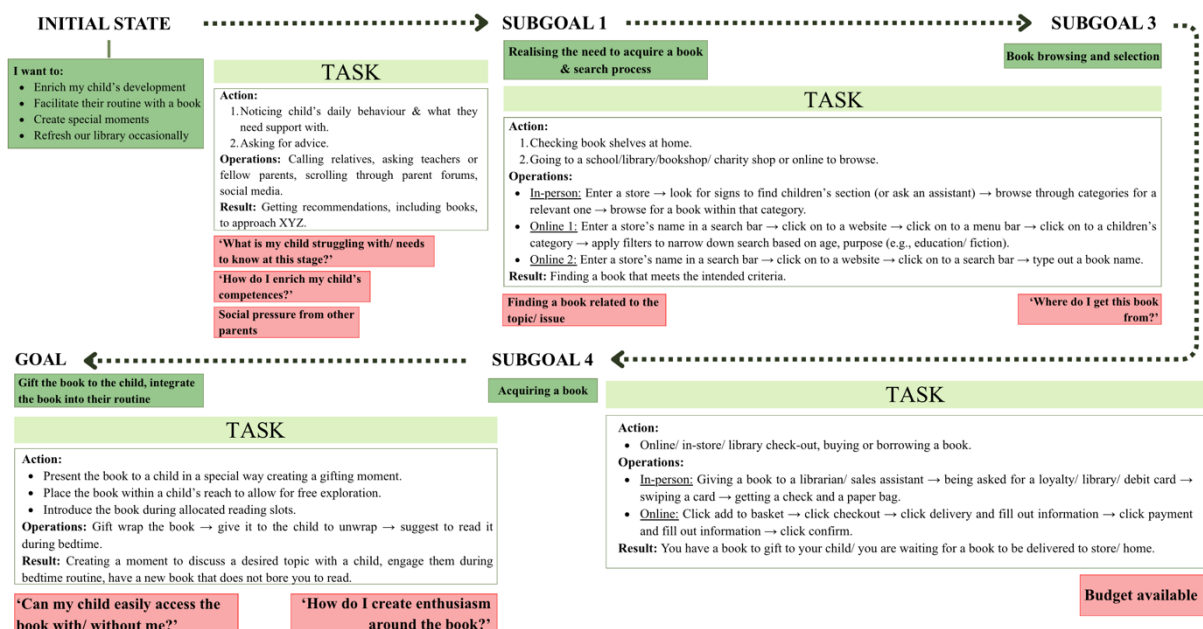
Appendix B. Community-Led Book Tagging Intervention: A Pilot at Goodenough College

We piloted a values-based book classification system within the Goodenough College Parents community, directly addressing families' difficulty in finding books aligned with their values. Volunteer parents tagged children's books according to thematic values identified in our research—prioritizing "Nature Values" (environmental stewardship, biodiversity, climate consciousness) alongside emotional intelligence, diversity, resilience, and social justice themes. Each tagged book received a QR code sticker linking to our digital platform. When families scan the code, they access the book's thematic tags, view a map showing where across London the book has been read, and add their own location after reading. This creates a visible network of shared literary experiences, transforming solitary book selection into community practice. The intervention serves multiple purposes: it mobilizes climate-conscious parents in meaningful literacy action, positions environmental education as beginning with children's stories, and builds tangible infrastructure making values-based discovery intuitive. As one parent noted, seeing a book's journey through different London homes makes "protecting forests" not just a story, but part of a documented movement of families raising environmentally conscious children.



Figure X shows volunteer parents at Goodenough College tagging books and applying QR codes during our community workshop, demonstrating the collaborative nature of the classification process.

Appendix C. Activity Map for Parents' Book Purchasing Behaviour.



Appendix D: Use of Artificial Intelligence Tools

As declared in the cover sheet, the creation of this essay was supported by several AI tools, used for distinct purposes across different stages of the project. This appendix provides transparency regarding which tools were employed and how they contributed to the final work.

AI Tools Used and Their Applications:

1. Manus.ai – Website Prototyping

Manus.ai was used to prototype the "Storybooks" website interface. This tool facilitated rapid visualization of the platform's user experience, allowing us to iterate on design concepts and demonstrate the values-based classification system in a functional format.

2. Google AI Studio – EcoTales App Development

Google AI Studio was employed to create the EcoTales application prototype. This platform enabled us to build the AI-powered story generation system that co-creates ecocentric narratives with parent-child collaboration. Specific prompts used in Google AI Studio are documented below in Section D.1.

3. Claude.ai and Grammarly – Language Refinement

Claude.ai and Grammarly were used throughout the writing process for language correction, grammatical editing, and clarity improvement. These tools helped ensure academic rigor and readability while maintaining the author's original arguments and analysis.

4. ChatGPT – Marketing Material Design

ChatGPT was utilized to create the poster design for pediatrician waiting rooms, generating visual concepts and copywriting for the community intervention's marketing strategy.

D.1 Google AI Studio Prompts

---Start of chat---

User

create an app that allows parents to co-create ecocentric story books for their children by prompting any idea. make sure that the main character is always non-human and that it is aligned with the values of nature and ecocentrism. the stories should have 10 pages with colours and funny characters that engage kids to read them. Call the app: "Ecotales" show me three examples of prompts in the home of the app and a clear call to action button.

User

In the Ecotales app, create a feature that allows parents to share the storybooks they've co-created with their children. This could involve generating a shareable link or a simple PDF export. Ensure the sharing process is safe and easy for parents. The shared stories should retain their 10 pages, colors, and funny, non-human characters, non-humanized either.

Specification:

Print/PDF Export: I'll add a specialized `@media print` CSS layer. This ensures that when a parent clicks "Save as PDF" (triggering `window.print()`), the browser generates a beautiful, vertically-stacked 10-page document. UI elements like navigation arrows, progress bars, and header buttons will be automatically hidden, leaving only the vibrant artwork and story text.

Safe Share Link: I'll implement a "Copy Share Link" feature. This will serialize the story's title and text content into a Base64-encoded URL. When someone opens this link, the app will reconstruct the book and re-generate the whimsical images on the fly, keeping the "magic" alive without needing a heavy database.

Visual Appearance:

A new "Actions" menu at the top of the StoryViewer.

Modern, friendly icons for "Print" and "Link".

A success toast/notification when a link is copied.

A hidden-from-screen "Print Mode" layout that activates only during PDF generation.

---End of Chat---

Declaration of Intellectual Contribution

While AI tools were used to support technical prototyping, language editing, and design work, all conceptual frameworks, research design, analysis, and core arguments presented in this essay are the original intellectual contribution of the author(s). AI tools served as assistive technologies rather than primary creators of content.