

# Research on the Interactive Mechanism between Picture Book Reading and Children's Life Education from the Perspective of Embodied Cognition

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**Abstract:** Picture books are important in children's life education, but most common methods focus on storytelling and stirring emotions, and they treat children as passive receivers. This approach does not consider how a child's physical experiences, like touching things, moving around, and interacting with others, basically shape how they understand life; we use the idea of thinking with the body to redefine reading as an active experience that involves the whole body. A picture book turns into a situation that involves the body; when children touch the pages, copy the characters' actions, and imagine themselves being in the story, abstract ideas like care or loss become things they can really feel and understand. We look into how the child, the book, and the surrounding environment work together, and we explain in detail three ways this process works: sensory and emotional links, learning by moving and thinking, and making meaning from the situation. We offer some practical ways, such as setting up multi-sensory environments and connecting stories to real-life actions, to respect how children learn through their bodies; our goal is to create life education that children not only understand but also experience deeply, making it more personal and long-lasting.

**Keywords:** Body-based thinking; Reading picture books; Life education for children; Learning through the body; Sensory and movement experiences; Meaning creation

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## 1. Introduction: The case for an embodied approach to life education

One of education's most delicate and important tasks is helping children learn about the deep themes of life and birth, growth, connection, loss, and death; picture books specially mix visual art and stories, and people have long considered them gentle, useful guides for this task. Many studies show that these books teach children facts about how life works, help them care about others and build good values<sup>[1]</sup>, while common teaching methods usually involve adults reading the story first and then discussing it, focusing on understanding the story, learning moral lessons and reflecting on feelings. This traditional model is useful but built on the hidden thought of "thinking without the body," seeing picture books as holders of information and moral rules, and children as passive receivers of this content. This method focuses on passing correct ideas and feelings from books to children's minds, focusing on mental and emotional aspects, but ignoring

physical learning. As a result, children's understanding of "all living things grow" and "loving others" remains abstract and disconnected from their real lives. The thought of learning through the body can solve this problem: it comes from related studies and holds that the mind is closely connected to the body's interaction with the world <sup>[2]</sup>. Our thoughts and feelings are shaped by how we use our senses and move our bodies, just as we understand "grasping an idea" through holding objects and "warm relationships" through physical warmth. When we apply this to picture book reading, it becomes a multi-sensory activity where children touch book pages, copy character behaviors and imagine being part of the story, making the body an active part of learning rather than a passive receiver <sup>[3]</sup>. This study explores the role of physical participation in life education, focusing on how physical involvement helps children truly understand life themes, and offers guidance for parents, teachers and librarians to use picture books more effectively to help children understand life's mysteries.

## **2. Literature review: Existing paradigms and the embodied gap**

In the past, people have studied picture books and life education in three main ways, both in schools and daily work, and each of these ways has its own focus and weak points. The first and most common way is classifying content by themes; this method requires people to list all available picture books in order and group them by life-related themes, such as books about welcoming a new sibling, losing a pet or a grandparent, being kind to others, or being brave. The main focus of this method is to find and sort out these book resources, and the unspoken idea behind it is that letting children read the "right" content, stories that show life events, is the key way to teach them. Though this is important for building good libraries, this approach usually treats books as unchanging collections of lessons and pays less attention to how children actively engage with that content.

The second way focuses on the mental and emotional effects of reading; research in this field clearly shows that reading picture books together can help children feel for others, reduce worry about scary topics, and provide a safe place to talk about hard feelings <sup>[4]</sup>. This work correctly points out the important emotional part of life education, but it still relies on old ways of thinking about thoughts and feelings, where feelings are seen as mental states that outside things (like the story) can trigger or change. The body's role as the base of feelings, where feelings first show up as physical changes, is often not well explained in this situation <sup>[5]</sup>.

The third area includes creating practical ways of teaching; educators have creatively added activities to reading, such as group discussions, role-playing, and related art projects. These methods often include physical elements without planning to, and children might draw a picture of their family after a story about home or act out a scene about sharing. Yet in practice, these activities are often seen as extra things to do after the main part, reading and talking, and physical engagement is just an addition, not something regarded as central to how children first think about and feel the story itself <sup>[6]</sup>.

Recently, the idea of thinking with the body has started to influence reading research; scholars study "reading with the body," exploring how moving (such as using hand muscles when reading about holding something) helps children understand language. Others look at what the book is made of, how a book's weight, paper quality, or design affects how children engage with it. These are good steps, but there is a big gap: people do not apply the ideas of thinking with the body in a focused, orderly way for life education through picture books. Few studies have explained in detail how the child's body, the physical book, and the life-themed story work together to help children understand, so this study tries to fill that gap by offering a simple framework that puts body-based interaction at the center of learning about life <sup>[7]</sup>.

## **3. Theoretical foundation: Principles of embodied cognition**

Three core, connected ideas of thinking with the body form the basis of the analysis here; these ideas help explain why physical experience is not unimportant but necessary for learning.

### **3.1. Cognition is embodied**

This is the basic idea; our ways of thinking, like seeing, thinking, remembering, are not done by the brain alone, but are greatly shaped and limited by the way our bodies look and work. Our ideas are not abstract symbols, but are often based on the experiences we get from using our senses and moving. For example, we understand words like “up” and “down,” “hard” and “soft,” “push” and “pull” directly from how our bodies interact with gravity and objects; even complex, abstract ideas like “affection” or “hope” are often understood by comparing them to physical experiences, such as “a warm relationship” or “a rising hope<sup>[8]</sup>.”

### **3.2. Cognition is embedded**

Thinking does not happen in a space; it always takes place in a specific physical and social environment that provides resources and limits to shape how we think. A child reading a book alone in a quiet corner will have a different thinking experience than the same child reading the same book while sitting closely on a parent’s lap, even if the words and pictures are the same, because the environment, the lighting, the sounds, and the presence of others are part of the thinking process.

### **3.3. Cognition is enactive**

This idea puts focus on the active, creative role of the learner; knowledge is not something that already exists and is passed from the book to the brain, but is created through the ongoing, dynamic interaction between the child and their world. The child is not someone who takes in information passively, but an active participant who explores, handles things, and engages with the world, and through these actions, they build understanding. Learning is a process of doing and finding out new things.

For young children, whose thinking development is deeply tied to using their senses and moving, these ideas have direct and strong effects; the body is their main tool for learning, and they learn about the world by touching things, putting things in their mouths, dropping things, and moving around in it<sup>[9]</sup>. An educational method that ignores this biological and developmental fact goes against how children naturally learn, and when we look at picture book reading from this angle, it becomes a good chance for active learning. The book is not just something to look at; it is an environment to explore, a set of things to do, and a trigger for physical engagement that leads to real understanding.

## **4. The Interactive mechanism: Three dimensions of embodied meaning-making**

When we look at it through the idea of thinking with the body, life education through picture books is a dynamic, three-part interaction involving the child’s living body, the physical book, and the specific reading situation; this kind of interaction helps children learn deeply through three connected parts.

### **4.1. Sensory activation and affective grounding: Learning through the senses**

A picture book uses many senses in rich ways; sight is the most important, but the learning experience still involves all senses, and the touch-related part is especially strong for young children. The feel of a board book’s strong pages shows solidity and permanence, and a “touch-and-feel” book with a rough spot for a turtle’s shell or a soft spot for a rabbit’s fur gives direct, touch-based information that goes with the picture. This sensory input is not just for decoration; it makes abstract qualities real, and the physical feeling of softness under the fingers becomes a non-verbal, body-based base for ideas like “gentleness,” “comfort,” or “vulnerability.”

The visual parts, color, line, and composition, also work on a physical level; warm, bright colors can make children feel open and happy, a feeling that shows up in the body as relaxation, while dark, shadowy pictures with heavy lines might make the body feel a little tense, matching the story’s suspense or sadness. In a book about loss, pictures with lots of space can make children feel a physical sense of emptiness or absence, and in this way, the feelings linked to life’s challenges and joys are not just recognized with the mind but felt in the body. The emotional part of life education is literally part of

the body, creating memories tied to sensory experiences that are more long-lasting and personal <sup>[10]</sup>.

#### **4.2. Motor simulation and cognitive construction: From action to understanding**

Children are natural imitators; brain studies show that watching an action activates the same brain paths (mirror systems) as doing that action. When a child sees a picture book character jumping for joy, their own movement systems are subtly ready to do the same, and this unconscious copying of movement is a basic way for children to understand others' actions and intentions. Educators can use this by encouraging children to actively move their bodies.

For example, while reading a story about being generous, a teacher might ask, "Can you show me how the girl held out the gift carefully?" The child's action of slowly stretching out their hands with palms up is not just a performance but a thinking event, as it physically shows the idea of "offering." Similarly, acting out the daily watering of a seed (like in *The Carrot Seed*) shows the ideas of "patience" and "care" through repeated action, and the physical memory of that movement becomes part of the child's understanding of those words. Studies about how people use language show that much of our abstract thinking is built on comparisons to physical experiences, such as "I grasped the idea" or "She's a warm person." By physically doing actions related to life themes, hugging, caring for something, protecting, and letting go, children build the concrete, sensory and movement bases that later, more abstract understandings of love, responsibility, and loss will be built on.

#### **4.3. Situational immersion and meaning generation: Living the story**

A good picture book creates a world, and learning through the body works best when the child is not just watching that world but feels like they belong to it. Pretend play is the best form of this immersion; when a child puts on a cape and says they are the hero who saves the forest, they are not just remembering a story but becoming that character in their brain and body, experiencing the story from the inside. The values and choices of the character are tried out and felt directly. Simpler ways to recreate story situations are powerful; children physically move objects and arrange space to show story parts when using blocks to rebuild a book's city or arranging toy animals to restage scenes. This active process enhances children's understanding of relationships, sequences, and cause and effect. Additionally, the social and physical reading context is part of the "situation": the meaning of a family love story differs when read in a caregiver's safe arms, as the hug's warmth and safety become part of the story's message, reinforcing "love is safe and warm" <sup>[11]</sup>. The full-body, situational participation fosters personal truth, not borrowed lessons, that feels earned and owned.

### **5. Practical applications: Strategies for fostering embodied life learning**

To apply this theory in practice, people must shift their focus from leading discussions to creating experiences; the following methods work at home, in classrooms, and in libraries.

#### **5.1. Designing multisensory reading environments**

Teachers and parents should avoid only using quiet, still reading circles; they should choose physically interactive books (lift-the-flap, textured "feely," or wordless books needing children's story co-creation). They should also create warm, clear reading corners with pillows and soft lights for safety and focus, and add simple background sounds (rain for weather stories, soft music for lullabies) to engage multiple senses and help children's bodies understand the story.

#### **5.2. Integrating movement into the reading ritual**

Adults should not push children to sit still while reading but add movement to the reading process; they can use gesture guides (like asking children to "Show how the boy felt when he lost his toy") or movement responses (like asking children to "Tiptoe like the story's mouse"). After reading, adults should guide children to use their bodies to "shape" key story moments or let them take part in planting activities (touching soil, seeds and water) to link stories to long-term real-world

care practices.

### **5.3. Bridging the narrative and the lived world**

Best learning happens when the story and real worlds connect; people can take books as a starting point for kind actions. After a kindness story, they can do a simple kind act with children; after a nature book, they can take children for a sensory walk (touching bark, listening to birds, smelling flowers) to link book understanding to real life, letting children practice and remember story morals through physical actions and turn abstract values into daily habits<sup>[12]</sup>.

## **6. Conclusion**

Looking at picture book reading from the perspective of body-based thinking shows a richer, more active process than traditional models; life education is not just passing ideas from books to children's minds but a full-body experience where children's senses, movements and situational presence work with books to build personal life understanding, the softness of book pages, gesturing love or pretending to be brave are key learning ways. Creating whole-child reading experiences on purpose teaches more than life knowledge; it lets children feel and practice care, resilience, connection and change safely. This body-based way fits young children's natural learning and provides deeply felt life education. Future research can explore age differences in body-based responses, book design features that help with body engagement, and long-term effects of body-based vs. traditional reading.

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The authors declare no conflict of interest.

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