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Higher Colleges of Technology

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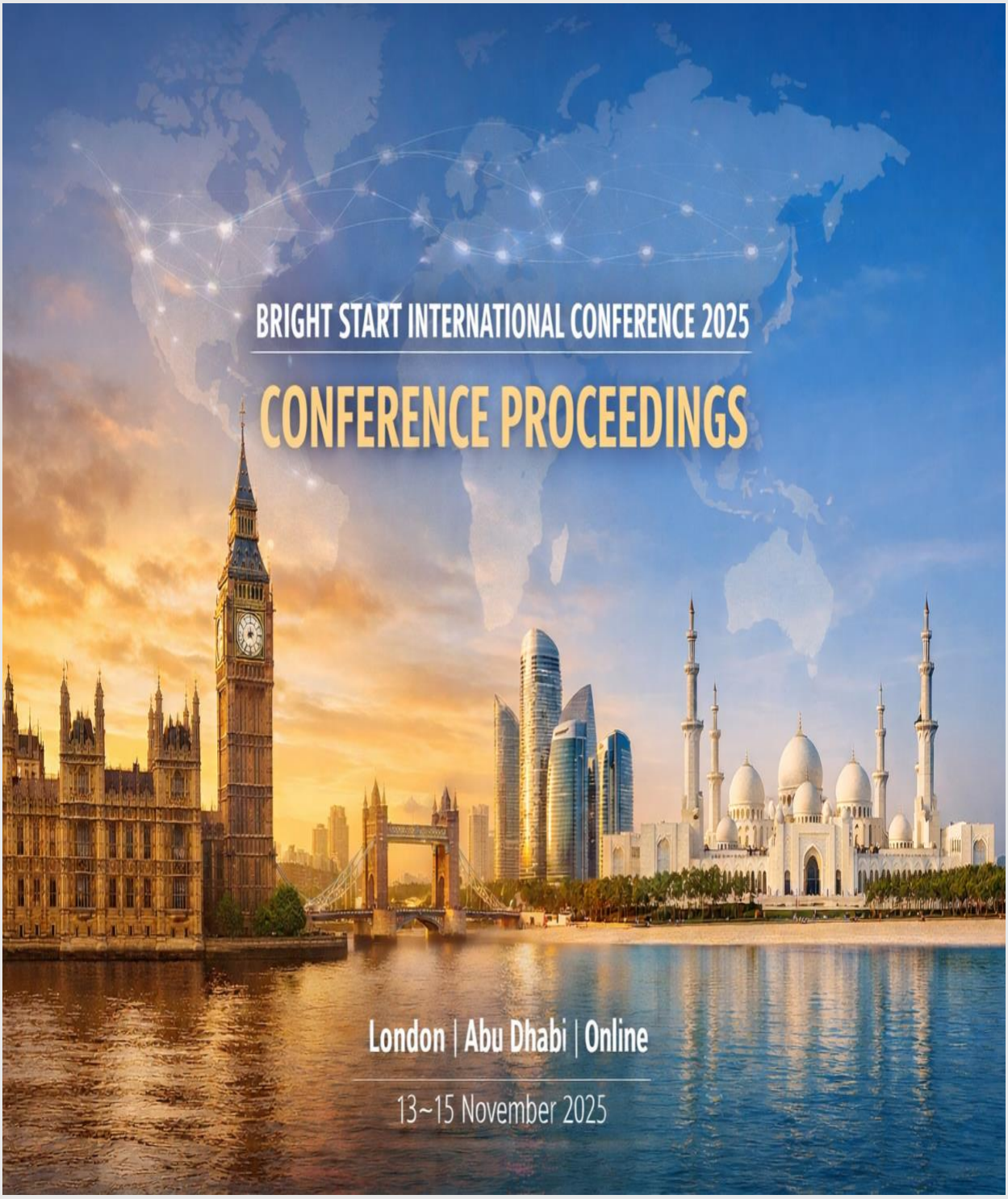

WELCOME

Welcome to the Bright Start International Conference 2025 – Conference Proceedings.
Since its establishment, the vision of the Bright Start International Conference has been to create a leading global platform for dialogue, innovation, and collaboration in early childhood education and development. **In 2025, the conference reached a significant milestone by connecting continents through simultaneous hosting for the first time**. Delivered concurrently **in London and at the Higher Colleges of Technology campus in Abu Dhabi**, the conference was united through seamless live global transmission, enabling shared participation across regions.
This distinctive dual-hub format facilitated real-time exchange across cultures, disciplines, and professional contexts, bringing together educators, researchers, policymakers, innovators, and practitioners from more than 40 countries. **By bridging Europe and the Middle East**, the conference created a genuinely global learning environment and demonstrated new possibilities for international collaboration in early childhood education.
The conference proceedings capture the breadth and diversity of contributions presented across the programme. They reflect emerging research, innovative pedagogical approaches, policy perspectives, and practice-informed insights, all focused on improving outcomes for children aged 0–8 years, their families, and the professionals who support them.
At a time of rapid social, technological, and educational change, the Bright Start International Conference provides a vital space to share evidence, challenge assumptions, and collectively explore future-focused, ethical, and inclusive directions for early childhood education, for the benefit of all children, wherever they are in the world.
We hope these proceedings serve not only as a formal record of the 2025 conference, but also as a lasting resource for reflection, learning, and collaboration well beyond the event itself.

The Bright Start Foundation Board

ABOUT THE CONFERENCE

The Bright Start International Conference is a global convening advancing early childhood education through research-informed practice, innovation, and cross-sector collaboration, underpinned by a multi-disciplinary and intergenerational approach. In 2025, the conference was delivered **through a unique simultaneous dual-hub model, hosted in London and at the** Higher Colleges of Technology campus in Abu Dhabi, and connected through live global transmission, enabling real-time exchange among participants from 43 countries across all continents. The conference programme addressed critical themes shaping the future of early childhood education, including:

- Artificial intelligence, digital innovation, and emerging technologies in early learning
- Children's participation and the **Voices of Children Pedagogy™**
- Inclusion, SEND, and child wellbeing
- Play-based and Montessori-informed pedagogies
- **Intergenerational approaches** in early childhood education
- Leadership, policy, and systems change in early childhood

A central outcome of the 2025 conference was a **call to action** for the development of the world's first **AI Literacies Professional Development Module in Early Childhood**, positioned as an integral component of the evolving **Voices of Children Pedagogy™** framework.

Through keynote addresses, plenary sessions, parallel presentations, interactive learning arenas, and global forums, the Bright Start International Conference provides a dynamic space for **knowledge exchange, professional learning, and collective reflection** across disciplines and sectors.

Building on its inaugural hosting at UCL East Campus, London**, the Voices of Children Pedagogy™ International Gallery was presented at the 2025 conference** as an annual celebration of young children's right to be heard. The conference also supported the international dissemination **of the first publication presenting children's views on their right to preschool education, launched in September 2025 at a United Nations meeting** in Geneva. Showcasing **children's artworks and messages from 10 countries** on large-scale LED screens, the Gallery amplified children's voices as active contributors to global early childhood dialogue. This work forms part of the Voices of Children Pedagogy™ Innovation Network, supported **by an Innovation Network Grant awarded by University College London (UCL) through the ESRC Impact Acceleration Programme.**

The conference is designed for professionals working with children aged **0–8 years**, as well as researchers, policymakers, and organisations committed to advancing **equitable, ethical, and future-focused** early childhood education worldwide.

The Bright Start Foundation looks forward to **welcoming the global early childhood community to the 2026 Bright Start International Conference**, as the dialogue, collaboration, and shared commitment to improving outcomes for young children continue to grow.

EDITORIAL NOTE

The **presentation summaries** and contributions included in these **Conference Proceedings** were submitted by presenters participating in the **Bright Start International Conference 2025**.
The content has been published **as submitted by the authors**, with no substantive editorial intervention beyond formatting and consistency.
The views and opinions expressed in the presentation summaries and contributions are those of the individual authors and do not necessarily reflect the views of the **Bright Start Foundation**, its Board, partners, sponsors, or affiliated institutions.
Where submissions reference research, practice, or case studies involving children, authors have confirmed that appropriate ethical standards, safeguarding measures, and informed consent procedures have been followed. Identifying information has been anonymised where applicable.

ETHICS, CHILDREN'S DATA & SAFEGUARDING

The Bright Start Foundation is committed to upholding the highest ethical standards in all conference activities, publications, and associated initiatives.

Where presentation summaries and contributions reference research, practice, case studies, or creative work involving children, authors have confirmed that appropriate ethical approval, safeguarding procedures, and informed consent processes were in place, in accordance with applicable institutional, national, and international guidelines.

Any personal or identifying information relating to children has been anonymised, unless explicit written consent for identification and dissemination was provided by parents or legal guardians. Audio-visual materials, children's artworks, and children's messages are included strictly within agreed ethical and safeguarding frameworks.

The Bright Start Foundation's work aligns with the principles of the United Nations Convention on the Rights of the Child, in particular Article 12, which recognises children's right to express their views freely in all matters affecting them, and to have those views given due weight.

The Foundation does not accept responsibility for the accuracy of individual presentation summaries or for any claims made by authors. Responsibility for the content rests with the individual contributors.

PUBLICATION INFORMATION

This volume accompanies the 2025 Bright Start International Conference, hosted in London and Abu Dhabi and delivered globally online, and forms part of the Foundation's annual conference publication series.

Published by:
Bright Start Foundation
Year of publication:
2025

PRESENTATION SUMMARIES (ALPHABETICAL ORDER)

Presentation summaries are listed in alphabetical order by the presenting author's surname. Where there are multiple presenters, summaries are listed according to the surname of the first-named presenter.

Dr. Sarah Aiono
CEO & Managing Director, Longworth Education, New Zealand

Bridging the Gap: Empowering Educators to Honour Play in a Policy Driven World

Introduction

While research overwhelmingly supports play-based, experiential learning as the foundation for early childhood development, educators often struggle to align this knowledge with the societal and policy-driven expectations of what it means to 'teach.' This tension leads to uncertainty, inconsistency, and ultimately, a compromise on best practice in early learning and early years schooling.

Main Points

This session explores the critical role of the adult in navigating this challenge—bridging what we know about how children learn through play with the realities of curriculum demands, assessment pressures, and public perceptions of teaching.

Drawing on the Play-Based Learning Observation Tool (P-BLOT™: Aiono & McLaughlin, 2018; Aiono, 2020; Aiono, Waitoa Tuala-Fata, McLaughlin, 2024)—a research-backed framework developed as an outcome of the author's doctoral work—this presentation will provide educators with an understanding of why a practical, observation-based tool is essential in helping them confidently integrate play pedagogy while ensuring accountability and professional rigour.

Through case studies, interactive discussion, and real-world application, attendees will leave with:

- A clear roadmap for upholding child-led, experiential learning in structured education systems.
- Strategies to reframe the educator's role from instructor to facilitator of deep, meaningful learning.
- A working knowledge of the P-BLOT™ as a practical solution to bridge the research-practice divide.

Conclusion

By honouring the principles of Montessori, Froebel, and Reggio Emilia, while addressing the realities of contemporary education, this session offers a revolutionary yet actionable approach to supporting holistic child development through play. It provides educators with a framework for bridging theory and practice while maintaining integrity and professional rigour.

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Aiono, S., & McLaughlin, T. (2018). *Play-based Learning Observation Tool Research Version 1.0 (P-BLOT 1.0): Manual and Supplemental Resources.* Unpublished instrument. Palmerston North, NZ: Massey University.

Aiono, S., Waitoa Tuala-Fata, T., & McLaughlin, T. (2024). *Ara Mātai Ako ā-Tākaro| The Play-based Learning Observation Tool Version 2.0 (P-BLOT 2.0): Manual and Supplemental Resources.* Napier, NZ: Taonga Auaha.

Jenny Amar
Early Childhood Montessori Education Trainer
Sunshine Teachers' Training, Jakarta, Indonesia

Playful Paths to Reading: Montessori Strategies for Early Literacy

Introduction

Early literacy lays the foundation for lifelong learning, communication, and self-expression. In Montessori education, reading readiness is not taught through rote instruction but cultivated through purposeful experiences that connect movement, language, and meaning. This presentation explores Montessori-based strategies that foster early literacy in children aged 2.5 to 4, emphasizing the integration of hands-on materials, phonetic awareness, and joyful exploration. The approach is rooted in Montessori's belief that language development unfolds naturally when children engage with their environment in meaningful ways.

Main Points

The session introduces practical techniques drawn from the Montessori materials to support emergent readers. These activities help children internalize phonetic patterns, build vocabulary, and connect spoken and written language. Participants will experience demonstrations of multi-sensory, movement-based games that develop auditory discrimination, visual tracking, and fine motor coordination—skills essential for early reading.

Jenny Amar will share how simple adaptations of Montessori materials and phonetic play can be effectively used across varied learning contexts, including home environments and early childhood classrooms. The presentation highlights how literacy learning becomes most effective when children's natural curiosity and rhythm of development guide the process. By linking theory with practical implementation, the workshop aims to strengthen educators' understanding of how Montessori literacy principles translate into vibrant, child-centered learning experiences.

Conclusion

The workshop encourages educators to view reading not as a mechanical skill, but as a creative and developmental journey. Participants will leave with actionable strategies to design literacy activities that are purposeful, engaging, and aligned with Montessori philosophy. These include approaches that integrate movement, language games, and phonetic sequencing to make early reading both joyful and effective. The insights shared can be applied immediately in classrooms and home learning environments, helping educators and caregivers nurture confident, enthusiastic readers who experience language as a living, expressive part of their world.

Dr. Essence Allen-Presley
CEO, The Education Institute for Early Intervention, Philadelphia, Pennsylvania, US

From Observation to Action: Equipping Educators to Bridge Early Intervention Gaps

Abstract
From Observation to Action: Equipping Educators to Bridge Early Intervention Gaps explores how educators can move beyond passive observation to intentional action that supports children with developmental needs. Presented by Dr. Essence Allen-Presley, CEO of The Education Institute for Early Intervention (EIEI), this session empowers educators to recognize early signs of developmental delays, document observations effectively, and collaborate with families and specialists to secure timely interventions. When early intervention systems are slow or unresponsive, Dr. Presley's evidence-based strategies provide practical methods for educators to implement classroom-based supports and see measurable progress through incremental steps. Participants will learn how to use tools such as the Ages & Stages Questionnaire SE (ASQ), TPITOS, and Response to Intervention (RTI) frameworks to guide decision-making. Through real-world examples and actionable frameworks, this presentation demonstrates how educators can create inclusive learning environments that prioritize proactive, responsive, and compassionate approaches to child development and early learning success.

Sarah Jane Anthony
Kristín Einarsdóttir
Co-founders and Co-directors, Smart Teachers Play More, Reykjavík, Iceland

Teaching from the Heart: The Calming Classroom and The Active Classroom

Introduction

Modern classrooms are vibrant, diverse, and often demanding spaces—for both teachers and children. Balancing energy with calm, academic focus with emotional regulation, is essential to creating joyful, inclusive environments where every child feels seen, valued, and capable of success.

The *Smart Teachers Play More* (STPM) methodology offers a holistic, research-informed framework for teaching "from the heart." Drawing from positive psychology (Seligman, 2011), embodied cognition (Murphy Paul, 2021), and insights from mindfulness and well-being science (Smith, 2021; Wiseman, 2021), STPM integrates movement, mindfulness, and sensory learning into everyday classroom practice. This approach supports both academic achievement and emotional well-being, ensuring that learners of all backgrounds and abilities can participate meaningfully.

At its core, STPM is founded on the belief that young learners thrive when body and mind are in harmony. Through purposeful, play-based, and mindful activities, teachers can cultivate balance—enhancing classroom atmosphere, supporting teacher well-being, and promoting holistic child development. In a time when educators face increasing pressure and children's emotional needs are greater than ever, STPM provides a sustainable way to restore joy, focus, and connection to learning.

Main Points

The presentation is divided into two 50-minute interactive sessions, each offering hands-on, practical strategies that can be applied immediately in educational settings.

The Active Classroom

This dynamic, highly practical session introduces participants to the Smart Teachers Play More method—a structured yet playful approach built around the formula:

Teaching Objective + Movement / Play / Sensory
= Engaged Minds
= More Confident Learners
= Happier Classrooms

Participants will experience this method in action through a series of short, interactive activities and core games that demonstrate how physical movement can easily be combined with early learning across the curriculum. The session introduces three key physical approaches that underpin the method:

Increasing heart rate through movement activities to energise learners and enhance focus and engagement.

Embodied cognition, where specific movements are purposefully linked to learning objectives to deepen understanding and memory.

Building physical skills—such as balance, coordination, and motor control—that support overall health, confidence, and well-being.

These approaches are demonstrated through practical examples that support foundational academic concepts—including literacy, numeracy, problem-solving, spatial awareness, and language development—while simultaneously fostering creativity, cooperation, and social-emotional growth.
By engaging directly in these hands-on experiences, educators will see how purposeful movement and play can transform teaching objectives into active, embodied learning moments that capture attention, boost motivation, and strengthen classroom relationships. The session highlights how simple, adaptable strategies can create lively, inclusive environments where body, heart, and mind learn in harmony.
Participants will leave with a toolkit of easy-to-implement ideas ready for immediate classroom use.
The Calming Classroom
This reflective, hands-on session introduces participants to The Smart Teachers Play More concept of Now Minutes—short, 1–10 minute time-outs designed to restore focus and balance throughout the day.
These purposeful pauses help children and teachers practise:
Attention (mindfulness) – being present and aware in the moment
Breathing – using breath to calm and regulate emotions
Relaxation – releasing tension and restoring focus
Positivity – nurturing optimism and self-belief
Gratitude – fostering appreciation and emotional connection
Through guided demonstrations, participants will experience how these brief, structured practices can be woven naturally into classroom routines and transitions to support emotional regulation, focus, and well-being.
The session also introduces the Calming Kit—a practical collection of tools and resources designed to make calm, connection, and self-regulation accessible at any moment.
By integrating The Smart Teachers Play More concept of Now Minutes and using the Calming Kit, educators can create peaceful, nurturing classroom environments where both adults and children can pause, reset, and flourish.

Conclusion

Teaching from the Heart – The Calming Classroom and The Active Classroom invites educators to rediscover balance in their teaching practice—energising learning while nurturing stillness and reflection.
Participants will leave with:
Practical strategies to integrate movement and mindfulness into daily routines
A deeper understanding of how physical and emotional balance supports learning
Concrete tools such as the STPM formula, Core activities and Now Minutes to apply immediately in their classrooms
The message is simple yet profound: small, intentional actions can lead to lasting transformation. Whether through a mindful moment, a playful movement, or a shared laugh, educators have the power to create spaces where both hearts and minds can truly flourish.

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Wiseman, R. (2021). *The Luck Factor.*

Saga Arola
Head of Pedagogy, Moomin Language School, Helsinki, Finland

Screen Time with Purpose: Using Digital Tools Wisely in Early Language Learning

Introduction

Digital tools are an integral part of today's world and play an ever-growing role in young children's lives. Understandably, educators and parents alike are concerned about how much time children spend with screens. However, the true educational value of technology depends less on how much screen time children have and more on how that time is used. This session invites educators to shift the focus from screen time limits to purposeful digital engagement. It explores how thoughtfully chosen digital tools can enrich early foreign language learning while supporting children's well-being and maintaining a healthy balance between on-screen and off-screen experiences.

Main Points

Drawing on practical examples from Moomin Language School, this session demonstrates how interactive digital tools can support both learners and teachers and promote inclusion. Participants will gain practical insights into the pedagogical role of digital tools in early language education and learn clear criteria for selecting high-quality, developmentally appropriate content.
International guidelines and recommendations for balanced screen use will also be discussed, helping educators make informed decisions that prioritize learning and well-being. The session highlights a blended approach that combines digital and hands-on activities to create engaging, inclusive, and effective language learning environments.

Conclusion

By the end of the session, participants will feel confident in using digital tools with purpose and balance in early language learning. They will leave with practical strategies for combining technology with off-screen play and interaction. Above all, the session encourages educators to see digital tools as meaningful extensions of their teaching that help children learn languages with curiosity, joy, and purpose.

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Alexandra Ashworth
Literacy interventionist, Founder, Playful Progress LLC, United States

Puppetry as Empowerment: Providing Opportunity for Every Child's Voice to be Heard

"In presenting Puppetry as Empowerment: Providing Opportunity for Every Child's voice to be Heard", educators will be informed and obtain physical practice of utilizing a trauma-informed lens to provide students equitable opportunity not only to sour forth their student's academic growth, but that of their socio-emotional growth within Early Childhood through early School Age Student Populations, with the presentation being organized as follows:
Introducing the life story of my twin brother, Cole, who has Cerebral Palsy and a Learning Disability. Whilst doctors stated that he will never walk, talk, or survive past the age of five, he defied the odds and found his voice through Drama Therapy, Puppetry within his Early Childhood Education experience and arts-integrated curriculum. Throughout his education, even whilst feeling with his speech delays that his knowledge couldn't be conveyed, he spoke through Puppetry, Song, and Dance.
Conveying the power of Puppetry within not only his life, but the many young lives who feel as though their voice, identity, and story have been denied systemically and within the Education System as a whole.
The cultural and Diversified power of puppetry as a means for each child to feel seen and heard in embracement of race, culture, neurodivergence, disability, gender, and socio-economic background.
The myriad of cultures pertaining to the following styles of Puppetry: Indigenous Puppetry, Hand-Rod Puppetry, Object Puppetry, Glove Puppetry, Bunraku, shadow Puppetry, and Spectacle Puppetry. Focus placed on how these styles can be related to children's individual experiences, cultures, and community/peer connections.
The utilization of Puppetry to tell one's story and express one's understanding of emotion, exploration of trauma, and social interactions with peers, specifically within ages 1-6. Providing a deeper understanding of the impact of Puppetry with:
Toddlers: Focusing on peer-to-peer interactions, identification of emotions, and lived experience, alongside behavior management.
Preschool: Focusing on perspective taking, exploration of ecological theory as a basis for the myriad of relationships and cultural experiences each child experiences.
School Aged: Puppetry as an avenue for safety in expressing their knowledge and understanding, socio-emotional understanding within peer-to-peer relationships, and Trauma-Informed Practice for educators in relating to and connecting with families, cultural backgrounds, socio-economic status, and the impact of these factors within a child's educational experience through Kindergarten.
Empowering Educators with tools to connect and hear each child's story through the forms of Puppetry, Music, Movement, and Dance within Language, Literacy, Cognitive, and Socio-Emotional Development.
How Music, Movement, and Literacy bridges gaps for Multilingual learners, children with disabilities, and varying backgrounds within peer-to-peer relationships.
Providing educators with the tools to individually, intimately, and creatively connect with and uplift each child within their care.

Closing:
Reflecting on how Puppetry and the arts reflect children's individual stories and understanding of the world surrounding then, just as it does for Cole today- affirming his identity as precious, loved, embraced, represented, and most importantly, heard."

Dr. Lora Battle Bailey
Provost and Vice President for Academic Affairs, University of the Virgin Islands – U.S. Virgin Islands, USA

From Play to Pathways

Introduction

As early childhood educators confront both unprecedented technological transformation and widening equity gaps, this session introduces a future-focused framework for leveraging artificial intelligence (AI) to spark curiosity, strengthen inclusivity, and preserve the sacred role of play in the birth-to-eight learning window. Grounded in foundational developmental theory and global best practices, this session invites educators, administrators, and families to consider how AI can act not as a replacement for human connection—but as a powerful partner in personalized learning and intervention.

Main Points

- Developmentally Aligned Use of AI: Drawing from Jean Piaget's cognitive development theory, participants will explore how emerging AI tools can be integrated with child-centered play to support curiosity, exploration, and early concept formation. For example, AI-assisted autism screenings (Zhang et al., 2023) and early literacy programs show promise when used within familiar, playful environments.
- Global Innovation & Inclusion: Case studies include the UAE's use of ChatGPT to support Arabic literacy (Hinduja, 2023), and UNICEF's integration of AI in culturally responsive education across low-resource settings. These examples illustrate how teacher-AI partnerships and family engagement can enhance access, equity, and culturally grounded learning.
- Neuroscience-Informed Practice: Insights from Harvard's Center on the Developing Child and Zero to Three emphasize the power of open-ended play in strengthening executive function and socio-emotional growth. Attendees will see how a blend of structured and exploratory play—amplified by AI—can nurture lifelong learning habits and cognitive flexibility in young children.

Conclusion

The session offers actionable strategies for embedding AI within curiosity-led, inclusive, and developmentally appropriate learning environments. Through practical tools, global models, and ethical guidance, participants will leave equipped to reimagine their classrooms and communities as vibrant ecosystems of digital innovation and human connection. The presentation concludes with a call for continued cross-sector collaboration to ensure AI tools uplift rather than undermine early childhood development and equity.

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Susie Beghin

RECE, Author, and Founder, Alpha's Discovery Kids Child Care & Susie Beghin Academy, Caledon, Canada

Little Minds, Big Discoveries: Bringing STEAM to Life in the Early Years

Introduction

In early childhood education, curiosity and creativity are the driving forces behind lifelong learning. The early years provide a unique window of opportunity to build foundational skills in science, technology, engineering, arts, and mathematics (STEAM) through play and exploration. However, many educators and parents feel uncertain about how to integrate STEAM into their daily routines—especially without access to specialized materials or training. This session addresses that gap by offering practical, developmentally appropriate strategies to make STEAM learning accessible, meaningful, and engaging for young children.

Rooted in the principles of *How Does Learning Happen?* (Ontario's Pedagogy for the Early Years), this presentation demonstrates how play-based, inquiry-driven learning experiences naturally align with STEAM. By focusing on exploration, discovery, and problem-solving, educators can nurture children's innate curiosity and help them see themselves as capable learners and innovators.

Main Points

1. Understanding the Core Principles of STEAM in Early Childhood

STEAM in the early years is not about complex experiments or expensive tools—it's about cultivating a mindset of wonder. Participants will explore how scientific thinking, engineering habits, and creative expression emerge naturally through play. By encouraging observation, prediction, experimentation, and reflection, educators can support the cognitive and social-emotional growth essential to school readiness and lifelong learning.

2. Fostering STEAM Thinking Through Play

Play is a child's laboratory. Through sensory exploration, construction play, storytelling, and artistic expression, children develop the ability to ask questions, test ideas, and build connections. The session will highlight real-world examples and simple activities that promote STEAM learning—such as experimenting with ramps and motion, exploring light and color, or using recycled materials for building and design. These activities invite curiosity and problem-solving while strengthening fine motor, language, and reasoning skills.

3. Creating Environments that Inspire Inquiry and Discovery

A rich learning environment is one that invites exploration. Educators will learn how to transform ordinary spaces into hubs of creativity using everyday materials. Strategies include setting up provocations, encouraging open-ended materials, and designing flexible learning centers that foster both individual and collaborative investigation. The emphasis will be on accessibility—showing that meaningful STEAM experiences can happen anywhere, from a classroom corner to a kitchen table.

4. Empowering Educators and Caregivers

Confidence is key when implementing STEAM. This session will provide educators and caregivers with tools to recognize and extend STEAM learning moments in daily routines. Participants will leave with

practical examples, reflection questions, and ideas to share with families—bridging the gap between classroom and home learning.

Conclusion

By embedding STEAM concepts into play, educators can create vibrant, curiosity-driven learning environments that help children make sense of their world. The integration of science, technology, engineering, arts, and mathematics nurtures critical thinking, creativity, collaboration, and communication—the essential skills for the future. Most importantly, this approach reminds us that *every child is a scientist, an artist, an engineer, and a thinker from the very start.*

This session will inspire participants to see STEAM not as an "extra," but as a natural extension of play-based learning that strengthens all areas of development. Attendees will walk away with renewed confidence, a toolkit of practical strategies, and the reassurance that big discoveries begin with little minds—and a simple invitation to explore.

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Kate Beckwith, MA, MBACP
Founder & Clinical Director, Kate's Garden; Psychodynamic Psychotherapist; Pioneer of the Nature-Integrated Psychodynamic Model; TEDx Speaker; Writer | Essex, United Kingdom

Beyond Four Walls: A Therapeutic Case for Nature, Play & Autonomy in Child Development

It began with a pony, a pair of boots, and a practical question: *"what if the environment itself was part of the intervention?"*
Childhood has changed fast: free play is shrinking, surveillance is rising, and classrooms often train compliance over curiosity (Child in the City, 2025). UK children spend 50% less time outdoors than their parents did (Save the Children UK, 2022), and one in five faces a probable mental health difficulty (NHS Digital, 2023). Settings must adapt.
This session presents an evidence-informed case for widening therapeutic and educational spaces so children can feel, relate, regulate and think more freely. It introduces a hybrid model that pairs a traditional consulting room with a private, nature-rich outdoor space designed for choice, confidentiality, movement and play. Grounded in psychodynamic thought and a commitment to freedom, the model is developmental and adaptable across clinics, schools, and families.
The Kate's Garden model grew from my own journey as a neurodivergent child who couldn't quite reach help, and as a clinician determined to make sure others could. It responds to current need and offers a clear set of principles to guide how we can better meet children where they are.
Reduction in outdoor play coincides with rising mental health needs and shrinking autonomy (Dodd, Lester and Sandseter, 2023; Play England, 2025). Expanding movement, sensory play and contact with nature beyond preschool is a crucial point for prevention and intervention.
Neuroscience shows us that nature is good for health and wellbeing and that proximity to green space improves mental health and reduces inequalities (Geary et al., 2023; Garrett et al., 2023). UK green social prescribing demonstrates lasting gains in wellbeing (The Wildlife Trusts, 2022), and neurobiological research links greener environments to structural brain differences in areas supporting attention and regulation (Dadvand et al., 2015; Vanaken and Danckaerts, 2018). Nature is not decorative—it's regulatory and essential.

Main Points

1. Why setting matters

For a child, entering a setting can trigger the same amygdala alarm as stage fright: 'not safe yet.' Environments can amplify this alarm—through confined spaces, forced stillness or feeling watched—or help the nervous system downshift into safety and curiosity. When children are offered real choices—where to go and what to do—their brains recruit systems needed for judgement, planning and connection. Weather, light, animals and natural textures offer real-time feedback that builds a sense of realness, interoception, consent and trust. The setting becomes part of the intervention, not just the backdrop.

2. Practical switches

Children regulate best when they can choose where to be, how to move, and how close to get—the three dials: place, pace and proximity. Adults support this with simple, repeatable moves that invite

choice, integrate movement, match sensory materials to state, and remove hazards without stripping growth-supporting risk.

3. Psychodynamic principles made simple

Children speak through behaviour long before words. The adult's capacity to hold transference, offer containment, and sustain an attachment-based stance allows fear to settle and curiosity to re-emerge. When adults stay steady rather than rushing to fix, the relationship itself becomes the regulating force. An integrated setting allows more opportunities for acting out, projection, and symbolic communication to unfold naturally, giving the therapist richer material to observe and work with. Over time, this helps children pause, make choices, say no safely, and repair after conflict.

4. Inclusive by design

Real inclusion begins with access, autonomy and agency. Not every child can walk into a room, sit in a chair and concentrate — but every child can enter a space that meets them where they are. When children can move, choose quiet corners or seek comfort through activity or animals, the threshold for engagement lowers. The environment becomes a bridge, allowing those with different sensory, developmental or relational needs to participate without masking or performing. Belonging is often first felt through place, rhythm or activity rather than words. When settings flex to fit the child, more can access meaningful therapeutic and developmental experiences.

5. Vignettes (evidence in action)

Clinical vignettes show how small shifts in setting and stance unlock change. For some children, work begins indoors and expands outwards; for others, freedom outside comes first. These transitions signal growth in regulation, symbolic thought and relational capacity. The common thread is that choice transforms what's possible.

6. Parent work — the engine of change

Parent work runs alongside child work. When parents understand what their child's behaviour communicates, the whole system can shift. A simple five-step micro-plan—reflecting, recognising, offering choices, waiting, repairing—helps embed change at home.

7. From Kate's Garden to the wider world

The principles behind Kate's Garden are designed to travel. You don't need woodland or major investment to create regulating spaces. What matters is how the environment meets the body, and how choice, movement and containment are woven together.

Current systems often make things harder than they need to be — for children, families, therapists and staff. With thoughtful design and a shift in mindset, we can make things easier: easier for children to access help, easier for professionals to deliver it, and easier for everyone around the child to work together.

Conclusion

What began with a simple idea about opening the doors has become a clear call to action: if childhood has changed, our settings must change too. When we trust children's capacity to know what they need and see the environment as part of emotional life, we work with—not against—their natural drives and rhythms. Integrating setting into the intervention creates space for regulation, relationship and learning to unfold more freely, with less strain on those supporting them. Freedom of movement, choice and

sensory connection should not be privileges; they are foundations of healthy development. Access to natural spaces is part of that birthright, not a luxury for the few.

This isn't about adding something extra; it's about returning something essential. By widening the frame and reimagining how and where support happens, we can build services that truly meet the needs of children, families and those who walk alongside them.

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The Impact of Creative Movement in Early Childhood Development

Introduction

Movement is one of the first ways children make sense of the world. Through moving, they explore, create, connect, and express. Creative dance, in particular, offers a unique opportunity for young children to engage their minds, bodies, and emotions in learning. Yet in many primary schools, time devoted to creative movement is limited, often overshadowed by pressures around literacy and numeracy. This session highlights the developmental value of creative movement and shares strategies for embedding it meaningfully into early childhood education.

While much has been written about the importance of play and creativity in the early years, movement is often treated as a secondary or optional activity rather than as a powerful pedagogical tool. Drawing on my doctoral research, this session aims to demonstrate how creative movement can be positioned at the heart of early years education to foster both academic and non-academic growth.

Why this matters

Drawing from my experience, I demonstrate how creative movement supports children's cognitive, social, and creative growth. Creative movement helps children:

- Improve attention, memory, and problem-solving skills.
- Build empathy, cooperation, and confidence in working with peers.
- Develop imagination, originality, and expressive communication.

These outcomes reinforce the need to treat movement not only as physical exercise but as a pathway for holistic development. In a time when children face increased academic pressures, reduced opportunities for free play, and growing social-emotional challenges, creative dance offers a sustainable and meaningful way to address multiple developmental domains simultaneously. It also reflects international priorities in education that emphasise creativity, wellbeing, and holistic development for young learners.

What was explored

The session builds on an action research study with 6–7 year olds in a primary school in England. Over six months, children engaged in creative dance sessions that used stories, improvisation, group choreography, and reflection. Observations and children's own voices revealed how movement became a facilitator for:

- Focus and engagement in learning.
- Social bonding through collaborative movement-making.
- Creative confidence, as children experimented and took risks in a safe environment.

The research process highlighted not only what children gained, but also how they gained it. Sessions were carefully scaffolded to encourage participation at different ability levels, and children were given space to negotiate ideas, share leadership, and contribute to the group. Their feedback and reflections indicated that creative movement gave them new ways of thinking and feeling about themselves as

learners. This shows the potential of creative dance to complement classroom goals while enriching children's experiences of school.

Practical Strategies for Educators

The study also revealed effective classroom practices teachers can easily adopt, such as:

- Using story-based movement prompts to connect literacy and embodied imagination.
- Designing collaborative improvisation tasks to strengthen peer relationships.
- Facilitating reflection and dialogue to link movement with ideas and emotions.
- Creating inclusive movement opportunities that adapt to different abilities and confidence levels.

These strategies demonstrate that creative movement is not limited to specialist arts settings; they can be embedded within daily teaching routines with minimal resources. Importantly, they give educators tools to promote engagement and creativity without sacrificing curriculum priorities, positioning dance as an ally rather than a distraction in the classroom.

The Holistic Creative Dance Education Model

Building on these insights, I developed the Holistic Creative Dance Education Model, which will be shared in this session. This model offers a structured framework for integrating creative dance into educational practice. It emphasises:

- Child-led exploration that nurtures self-determination, imagination, and self-expression.
- Progressive curriculum design that ensures continuity and challenge in learning.
- Collaborative creativity where teamwork, communication, and leadership are fostered.
- Inclusivity and differentiation so all learners, regardless of ability, can participate and thrive.
- The role of the educator as facilitator, supporting children's journeys rather than directing them.

By bridging research and practice, the model provides a roadmap for teachers to embed creative dance into daily learning, aligning with broader educational priorities for creativity, wellbeing, and holistic growth. It also contributes to professional development by offering teachers a clear structure for implementing dance without requiring specialist dance training. The model resonates with contemporary educational theory by shifting teacher roles from directors to facilitators, empowering children to take greater ownership of their learning.

Conclusion

This session highlights not only the developmental impact of creative movement but also a practical model educators can use to make it part of everyday teaching. Participants will gain both inspiration and concrete strategies to champion creative dance in early childhood education — helping children to grow as imaginative, confident, and connected learners.

Looking forward, the Holistic Creative Dance Education Model offers scope for further adaptation and research across different contexts and cultures. By situating creative movement at the centre of early years education, we can enrich children's experiences, strengthen their capacities for learning, and foster the skills needed to thrive in an increasingly complex world.

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Roots Before Wings: Nurturing Social & Emotional Well-Being in Early Childhood Through Play and Parent Involvement

Introduction

Early childhood represents a biologically sensitive period in which the developing brain is highly responsive to environmental input and human connection. Research in developmental neuroscience and early education (Knudsen, 2004; Kuhl, 2004; Hensch, 2005) demonstrates that experiences before age seven build the neural foundations for attention, language, self-regulation, and social competence. Yet in many settings, parent-school collaboration remains limited to logistics rather than daily co-learning. This session introduces the P.A.R.E.N.T. Involvement Framework: Presence, Agency, Rhythm, Embodiment, Nurture, and Trust, linking practical parent behaviours to brain systems that support learning and well-being. Drawing on Froebel-inspired play, rhythmic learning, and co-regulation, the approach translates evidence into routines families and schools can use together during the imprint years.

Main Points

The framework positions Presence as focused, attuned attention: eye contact, prosody, and small surprises that prime curiosity and encoding via attention and memory systems. Agency grows through structured child-led play; when children choose, build, and solve within gentle boundaries, prefrontal-striatal circuits for motivation and self-efficacy strengthen, moving learners from *I can't do it* to *I can do it* and more importantly to *I can describe and share it*. Rhythm emphasises frequency over duration: short, regular repetitions and beat synchronisation (co-singing, clapping patterns) align auditory-motor timing networks, supporting phonological awareness, attention, and social bonding (Trainor & Cirelli, 2015). Embodiment grounds ideas in movement and sensation; what we commonly call "muscle memory" is motor learning, multi-sensory integration that anchors concepts through action (Zatorre, Chen, & Penhune, 2007). Nurture centres co-regulation: calm, empathic responses that stabilise autonomic state and keep the prefrontal cortex online for reasoning (Porges, 2011). Trust provides the relational scaffold-consistency of words, tone, and body language reduces threat reactivity and invites exploration.
Since 2017 the model has been implemented with over 1,000 students and parents in Greece through the exSELlens network and has been adopted by more than 50 schools. Implementation includes rhythmic micro-practices, guided crafts that progress from confidence to articulation and presentation, sensory-motor play, and reflective storytelling at school and home. Observations and educator/parent feedback indicate improved focus, calmer classrooms, richer expressive language, and stronger parent-teacher rapport. Schools report that the predictable rhythm of co-learning reduces stress and increases participation, particularly in PreK and early primary

Conclusion

Roots Before Wings reframes early education as co-regulation and embodied discovery rather than performance and correction. By embedding presence, rhythm, and trust into brief daily routines, educators and families convert ordinary moments into high-yield learning opportunities during the 0-7 window. Next steps include expanding longitudinal evaluation across partner schools, co-designing short professional-learning modules for teachers and caregivers, and developing simple fidelity metrics

(frequency of practices, articulation samples, and parent-teacher check-ins). The actionable strategies shared, structured child-led play, rhythmic and music-based routines, and emotion-language reflection, equip schools to cultivate confident, self-efficacious learners who feel safe to explore and ready to contribute.

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Before AI: The Inner Circle of Child-Led Play

Introduction

Artificial Intelligence (AI) is increasingly visible in classrooms, capturing children's curiosity and educators' imagination. From generating stories to visualising characters, AI offers novel ways to expand creativity and expression. Yet, the effectiveness of AI with young learners does not depend solely on the tool itself. Rather, it hinges on what happens before the technology is introduced.

This paper presents the SILENT MAP Brainstorming Hack, a structured yet playful framework that helps children prepare for safe, fun, and meaningful engagement with AI. It is designed to create a reflective "inner circle" where learners first explore their own thoughts, followed by an "outer circle" where AI becomes a supportive partner in extending their ideas. By slowing down the process, teachers can safeguard children's imagination, nurture agency, and ensure AI enhances rather than replaces creativity.

Main Points

The SILENT MAP Framework

At the heart of this model is a set of nine steps, captured in the acronym SILENT MAP. Each step acts as a simple entry point for learners to pause, reflect, and generate ideas before engaging with technology:

Silence: A brief moment of stillness that allows learners to settle, notice, and prepare to create.

Inquiry: Gentle, self-guided inner questioning that sparks curiosity and draws out children's prior knowledge.

Listen: Attentive listening to one's own emerging thoughts.

Express: Early articulation of ideas through drawing, writing, speaking, or role-play.

Nurture: Building on what is emerging with care and encouragement.

Talk: Sharing insights in simple, collaborative dialogue.

Map: Organising ideas into categories or patterns that can be developed further.

Architect: Designing an initial plan, story, or prototype from the brainstorm with AI or online research invited as a playful partner to help visualise or expand them.

Present: Sharing outcomes with the rest of the teams and requesting constructive steps forward.

This sequence ensures that children's imagination comes first and remains central throughout the process. AI is introduced not as a replacement for thinking but as a collaborator that amplifies what children have already created.

The Two Loops: Hush and Buzz

The SILENT MAP framework is supported by two complementary loops. The Hush Loop (Insight Loop) nurtures inward reflection, curiosity, and exploration. The Buzz Loop (Outsight Loop) channels outward action, expression, and collaboration. Together, they create a rhythm that moves children from inner insight to outward expression, and only then into engagement with AI.

This structure is not only practical but also developmentally aligned. Research in developmental neuroscience shows that young children benefit from clear routines that build attention, regulation, and

self-expression (Knudsen, 2004; Kuhl, 2004). By embedding AI use within these loops, the framework ensures that technology serves learning rather than distracting from it.

Classroom Applications

The model is flexible and can be applied across subjects and ages. For example, in literacy lessons, learners may brainstorm story characters through SILENT MAP before asking AI to illustrate their creations. In science, students may express initial ideas about a phenomenon before using AI to simulate or visualise outcomes. In each case, AI is introduced after - not before - children's contributions, preserving ownership of the process.

Benefits for Learners and Educators

The framework offers several benefits:

Creativity and Imagination: Children's ideas remain central, ensuring that AI extends rather than overrides their thinking.

Agency and Confidence: By preparing before technology use, learners develop a stronger sense of authorship over their creations.

Collaboration and Listening: The early steps cultivate turn-taking, active listening, and building on peers' ideas.

Emotional Safety: Rituals of silence, nurturing, and expression create an environment where learners feel supported to share.

Critical Engagement with AI: When children first generate their own ideas, they approach AI outputs with a more evaluative lens, choosing what to keep and what to reject.

Conclusion

The introduction of AI into education offers enormous promise, but its long-term impact depends on how it is framed in early childhood. The SILENT MAP Brainstorming Hack provides a simple, repeatable structure that prepares children before they encounter AI, ensuring technology supports imagination rather than directing it.

This model has implications for classroom practice, teacher training, and curriculum design. By embedding pre-AI rituals into daily learning, schools can safeguard creativity, build digital agency, and promote safe, ethical engagement with technology. Future directions include piloting the framework across multiple subjects, developing teacher-friendly resources, and collecting evidence on outcomes for creativity, collaboration, and digital literacy.

The message is simple yet powerful: before children engage with AI, they need space to imagine, to listen, to nurture, and to map their own ideas. Only then does AI become not a replacement, but a partner in learning.

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Laying the Foundation: Building Executive Functioning Skills in Early Childhood

Abstract:
Executive functioning (EF) skills—including planning, working memory, inhibitory control, and cognitive flexibility—serve as the brain's "air-traffic control system," coordinating thoughts, emotions, and actions. These crucial capacities rapidly develop in early childhood and strongly predict school readiness and social-emotional competence. In this workshop, participants will explore how EF skills can be intentionally cultivated within daily routines, transitions, and play-based learning experiences for children ages 3–6. We will review evidence showing how the duration and quality of preschool attendance and teacher-child interactions influence EF development in young children, and how parent- and teacher-led interventions can effectively strengthen EF when embedded in responsive, predictable environments. Attendees will gain practical, rhythm-based tools to integrate EF skill-building into everyday classroom or home settings, supporting children's cognitive and emotional growth for improved school readiness and social success. By the end of the session, participants will leave with actionable strategies to empower young learners with these foundational skills for lifelong learning and positive social interactions.

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Therapy Animals in Early Learning Environments: A Case Study

Introduction

Across the United States, early learning environments are confronting rising emotional and behavioral challenges among young children, particularly following the COVID-19 pandemic. Recent national data underscores the urgency of addressing these issues with the U.S. Department of Health and Human Services (2025) reporting that autism now affects 1 in 31 children, with particularly high prevalence among boys and minority populations. York Day Early Learning in York County, Pennsylvania, is not unique in observing increased heightened anxiety, aggression, and social withdrawal among preschoolers. Deploying traditional interventions offer temporary relief but do not provide teachers with enough tools to address underlying emotional regulation needs. With pediatric mental health waiting lists months long, this presentation explores how integrating a therapy animal, specifically a certified therapy dog named *Annie*, can support children's emotional growth, resilience, and classroom engagement.

Main Points

Together, these findings illustrate the growing need for innovative, non-traditional approaches to social-emotional development. This presentation examines one such approach: the integration of therapy animals into early learning classrooms.York Day Early Learning, a standalone non-profit early learning program established in 1932, serves a diverse population where 84% of families receive scholarship support to attend. In the wake of the pandemic, educators observed an increase in behavioral incidents, emotional dysregulation, and anxiety among preschoolers. Traditional tools such as deep-breathing exercises and 'cozy corners' provided limited success.

In response, York Day Early Learning spent over a year implementing a therapy animal initiative centered around a dog named Annie. Collaborating with York College of Pennsylvania, the program emphasized intentional animal selection, staff training, certification, and ongoing evaluation.

The school experienced an 81% decrease in behavioral incident reports, during the research period, along with improved peer interactions and self-soothing behaviors among children. Teachers reported that Annie's presence reduced fear, fostered empathy, and created a more peaceful classroom environment.

These outcomes align with broader research indicating that today's early learners are navigating complex emotional landscapes shaped by increased developmental disorders, post-pandemic adjustment issues, and media-related behavioral influences (HHS, 2025; Newsweek, 2025; New York Times, 2024). Therapy-animal engagement offers a promising complementary strategy that emphasizes human connection, consistency, and emotional regulation, which are all key factors for social-emotional growth.

Conclusion

The integration of therapy animals in early learning environments demonstrates measurable benefits for children's emotional well-being and classroom behavior. Within the context of rising developmental diagnoses and post-pandemic behavioral challenges, such interventions represent more than enrichment; they are evidence-based responses to evolving early childhood needs. By fostering empathy, calmness, and social engagement, therapy animals can play a vital role in supporting holistic early learning experiences and preparing children for long-term success.

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The pivotal role of the practitioner in supporting self-regulation in the early years

Introduction

Self-regulation is increasingly recognised as a cornerstone of early childhood development, encompassing a child's ability to manage emotions, behaviours and cognitive processes. This skill set is essential for successful learning, social interaction and long-term mental health. In early years settings, practitioners are uniquely positioned to support the development of self-regulation through direct and intentional teaching, responsive collaboration and the creation of emotionally safe environments. This presentation delves into the neuroscience behind children's choices and how understanding these mechanisms can inform effective strategies for co regulation and emotional support. The session also draws on current research and practical examples to illustrate how everyday interactions and play based learning can foster self-regulation skills in young children.

Main points

Self-regulation involves a complex interplay of emotional awareness, executive functioning, and behavioural control. Children who are dysregulated—often due to overwhelming emotions —operate within a space where survival instincts dominate and reasoning is difficult. In such moments, practitioners must act as co regulators, providing calm, validating responses that help children feel safe and understood.

The presentation highlights several strategies for supporting self-regulation, including:

creating emotionally safe environments where children feel secure and valued.

using interactive whole-group reading sessions to promote language development and emotional literacy.

using modelling as a strategy to provide examples and structure for children to use as they grow in confidence and independence.

encouraging play-based learning that offers 'just right' challenges, fostering independence and problem solving.

employing reflective teaching practices to assess how language and self-regulation are scaffolded in daily routines.

During interactive reading sessions, as demonstrated in the presentation, practitioners can ask open ended questions that invite children to express feelings, make predictions, and relate stories to their own experiences. These activities not only enhance vocabulary but also provide opportunities for children to practice emotional regulation in a supportive context. Similarly, play scenarios that involve turn taking, negotiation and imaginative role play help children develop executive functioning skills, critical for self-regulation.

The role of the practitioner extends beyond structured activities. Everyday interactions, such as transitions, mealtimes and outdoor play, offer rich opportunities for modelling and reinforcing self-regulation. Practitioners who are attuned to children's emotional states can use cues and prompts to

guide behaviour, helping children recognise and manage their feelings. This gentle scaffolding is essential for building resilience and autonomy.

Conclusion

In conclusion, this presentation highlights the pivotal role a responsive practitioner plays in nurturing self-regulation in the early years. By understanding the neuroscience of behaviour and employing respectful strategies, practitioners can create environments that support emotional growth and cognitive development. The integration of play, language rich interactions and reflective practice ensures that children are given the tools to comprehend their own emotions, make choices and share their ideas effectively.

As children engage in meaningful play and social interactions, they build the skills necessary for lifelong learning and wellbeing. Practitioners who continue to reflect on their role, adapt strategies to individual needs and foster environments create a partnership where every child feels seen, heard, and supported. By embracing a holistic, empathetic and authentic approach, practitioners can truly make a difference in the lives of young children.

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Understanding the Opportunities and Challenges Facing the Field of Early Childhood Education: Global Insights from Site Visits and Conversations with Field Leaders

Introduction

Early childhood education lays a critical foundation for lifelong learning, personal development, and future success (Heckman, 2006; National Research Council, 2001; Shonkoff & Phillips, 2000). In the early years, children build essential cognitive, emotional, social, and executive function skills (Diamond, 2013; National Research Council, 2001; Raver, 2002). While there are many quality models of early childhood education, our rapidly changing world demands the field to evolve today so that young people may thrive tomorrow (National Association for the Education of Young Children, 2020).
The Reimagining Early Childhood Education (RECEPZ) project is a six-year research initiative led by a team from Project Zero at the Harvard Graduate School of Education in Cambridge, Massachusetts, USA and funded by the Abu Dhabi Department of Education and Knowledge in the UAE. This exciting study explores the future of early childhood education in a rapidly changing, interconnected, and technology-driven world. During this session, RECEPZ team members Dr. Edward P. Clapp and Dr. Christina Smiraglia present an overview of this multi-year study coupled with emergent findings from two initial inquiries into the opportunities and challenges facing the field of early childhood education. This session will also allow participants to engage with each other around key findings.

Main Points

The Reimagining Early Childhood Education project is guided by the question: How might early childhood education best support young people for success in life and work in the decades to come? To address this, the RECEPZ team will engage in three phases of work.

Three Phases of Work
Phase One: International Field Study & UAE Opportunities and Needs Assessment
The project began with a dual focus: understanding the unique opportunities and challenges of early childhood education in Abu Dhabi, while also researching global models to identify challenges, opportunities, and effective practices worldwide.
Phase Two: Collaborative Inquiry and Framework Development
Insights gathered during Phase One will shape a collaborative inquiry with more than 100 educators and administrators from approximately 24 early learning settings across Abu Dhabi. This diverse cohort—

including nurseries, schools, museums, and cultural centers—will work together to develop a new framework for early childhood education that will be published in a practitioner-facing book.

Phase Three: Certification & Professional Development

The final phase will involve creating a professional learning and certification model, helping educators build skills and strategies aligned with the newly developed framework.

UAE Opportunities and Needs Assessment

The RECEPZ research team began the study with an Opportunities and Needs Assessment of the local early childhood education landscape in Abu Dhabi, conducting three site visits to the emirate. During these visits, the researchers engaged 17 schools, nurseries, museums, art studios, cultural centers, and other early learning institutions. Classroom observations, interviews, and focus groups were conducted at these different environments to understand how local educators, administrators, and field leaders engage with and understand the present state and future potential for the field of early childhood education in Abu Dhabi.

Global Field Study

During the past year, the RECEPZ team also conducted a Global Field Study to surface opportunities and challenges facing the broader field of early childhood education today and tomorrow. The team solicited input through an international field survey and received more than 100 nominations for global field sites to visit, more than 100 nominations for global field leaders to interview, and dozens of media and literature recommendations. The team selected global field sites and global field leader interviewees based on diversity across a variety of characteristics, alignment with the project's research goals, and criteria such as expertise and recognized impact either globally or within a particular vicinity.

The RECEPZ team traveled to a dozen schools and early learning centers spread across five different continents. These included trips to the United Kingdom, Colombia, Kenya, and Japan, as well as multiple sites within the United States, including Hawaii, Florida, and Massachusetts. At the same time, the team also conducted virtual interviews with selected leaders in early childhood education, including policymakers, administrators, teacher trainers, academic researchers, and educators. Ultimately, the team interviewed 16 field leaders geographically distributed across six different continents.

This session shares emergent findings from the combined UAE Opportunities and Needs Assessment and the Global Field Study described above.

Conclusion

We cannot predict the future, but we can construct new, flexible approaches to early childhood education that prepare young learners to navigate the future with confidence, curiosity, and resilience. Investing in early childhood education today is an investment in the future, ensuring that each child has the tools and support needed to reach their full potential and contribute meaningfully to the world. In the years ahead, the Reimagining Early Childhood Education team hopes to support its cohort of educators and administrators in the pursuit of these goals.

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Physical Literacy for the 21st Century Child: Tech-Smart and Active

Keywords: *digital technologies, physical literacy, early childhood, embodied learning, educator perceptions, movement*

Introduction

In contemporary early-childhood education and care (ECEC) settings, digital technologies have become an inseparable part of young children's daily learning experiences. Tablets, interactive whiteboards, touchscreen devices and educational apps now coexist with traditional play-based practices, redefining how children explore, create and communicate. While digital technologies can enhance creativity, collaboration and problem-solving, their growing prevalence has simultaneously prompted concern regarding reduced movement, diminished outdoor play and the potential erosion of physical literacy. This study forms part of a doctoral investigation exploring how parents and educators perceive the impact of digital technologies on young children's physical literacies. The research is grounded in the belief that physical literacy—encompassing the motivation, confidence, physical competence and knowledge required for lifelong participation in physical activity (Whitehead, 2010)—is fundamental to holistic child development. Yet, as digital engagement rises, so too does the need to re-evaluate how children's movement experiences are being shaped in both home and school contexts. The study positions itself within a rapidly evolving digital landscape and seeks to bridge the gap between policy expectations, educational realities and lived experiences of young children. It argues that the challenge is not to reject screens but to re-imagine their role in cultivating physically literate, digitally capable learners.

Despite increasing recognition of the importance of physical literacy in national and international frameworks, the term remains inconsistently understood and applied in early-years settings (Australian Sports Commission, 2020). Educators and parents often focus narrowly on physical competence, overlooking the affective, cognitive and social dimensions of movement. At the same time, the digitalisation of childhood is accelerating. From smart toys and wearable devices to augmented-reality (AR) and exergaming platforms, technology influences how children move, learn and play. International literature highlights a tension that while technologies such as dance apps or motion-based games can promote coordination and engagement (Marsh et al., 2018; Mertala, 2019), overuse of passive screen media can hinder motor development, executive function and attention (Plowman & McPake, 2013).

Methodology & Theoretical Framework

The study draws on Bronfenbrenner's Ecological Systems Theory and Vygotsky's Sociocultural Theory to explore how children's physical literacy develops within interconnected social and digital contexts. Learning is viewed as relational and mediated by cultural tools, including digital technologies, which shape children's movement experiences through family, educators, and societal influences. Using a qualitative, phenomenological case-study design, the research examines two Queensland early-learning settings, engaging parents and educators of children aged 0–5 through semi-structured interviews and

observations. An abductive analytical approach integrates inductive coding with theory-informed categorisation to identify how movement, motivation, confidence, and digital engagement intersect in shaping children's physical literacies.

Main Points

Analysis of the qualitative data revealed five interrelated themes that collectively illustrate how digital technologies intersect with the development of physical literacy in early childhood. Participants consistently positioned movement, active play and gross-motor experiences as the foundation of physical literacy, echoing Whitehead's (2010) assertion that embodied engagement underpins confidence and lifelong participation in movement. Both educators and parents described unstructured outdoor play as essential for cultivating competence, resilience and motivation. At the same time, participants acknowledged that digital tools (e.g., interactive whiteboards) can support children's learning when used purposefully, but they also expressed concern about excessive screen time and its association with sedentary behaviour and diminished social interaction (Plowman & McPake, 2013; Mertala, 2019). Technology was thus perceived as both supportive and risky, requiring careful integration so that it complements rather than replaces physical exploration.

The social-emotional dimensions of physical literacy, including confidence, self-efficacy and enjoyment, were also influenced by digital engagement. When technology encouraged movement, rhythm and creativity, it appeared to enhance motivation and enjoyment; however, when used passively, it risked undermining children's intrinsic motivation for physical activity (Durden-Myers, Green, & Whitehead, 2018). Educators reported developing adaptive pedagogical approaches that align with the *Early Years Learning Framework* (Department of Education, 2022), incorporating digital modelling, risky play and inclusive movement opportunities. Yet they also highlighted tensions in maintaining spontaneity and physical engagement within increasingly technology-driven curricula. Across all participants, "balance" emerged as the overarching theme, which is an understanding that digital and physical experiences can coexist meaningfully when supported by intentional planning, co-play, and adherence to age-appropriate screen-time recommendations (World Health Organization, 2019).

These findings reinforce the view that physical and digital literacies are not mutually exclusive but dynamically intertwined within the ecology of childhood. As Davis (2025) suggests, educators must reimagine digital engagement as *active digital play*, using technologies to inspire movement, creativity and social connection while safeguarding unstructured play as the "engine room of movement." This balance demands a nuanced professional understanding of physical literacy as a holistic construct—encompassing physical, cognitive, and affective domains—supported by ongoing professional learning and reflective practice.

Conclusion

This research contributes to the growing discourse on harmonising digital technologies with movement-rich pedagogies in early learning contexts. Early findings indicate that intentional and relational uses of technology can enhance rather than hinder physical literacy when guided by reflective educators and engaged parents. Developing *tech-smart and active* children requires environments where curiosity, confidence, and movement thrive together. The study offers evidence-based insights for curriculum design, wellbeing initiatives and teacher education, encouraging the sector to view technology not as an adversary but as an ally in nurturing children who are both physically literate and digitally fluent.

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The Neurodivergent Child in Nature's Classroom: Therapy or Natural Habitat? Balancing Screen Time with Green Time

Introduction

Outdoor learning offers more than novelty; it provides a developmentally congruent environment for neurodivergent children, including those with autism, ADHD, PDA, dyslexia, and sensory processing differences. Drawing on research in forest therapy (Shinrin-yoku) and on neurodevelopmental foundations such as primitive reflex integration and cerebellar activation, this session argues that nature functions simultaneously as a regulatory context, a multisensory classroom, and a catalyst for inclusion by design. The presentation contrasts screen-saturated learning with structured, nature-based routines that promote attention, self-regulation, and social connection, and offers implementable tools for schools seeking evidence-informed change.

Main Points

• Rationale and evidence: Forest exposure reduces stress biomarkers and improves mood and attention; multisensory inputs (scent, touch, sound, visual patterns) activate parasympathetic pathways and support self-regulation.
• Neurodevelopmental mechanisms: Retained primitive reflexes (e.g., Moro) and coordination differences common in autism/ADHD can be addressed by repetitive, varied movements available outdoors (balancing, climbing, crawling), which support reflex integration and cerebellar-driven motor and executive functions.
• Basale stimulation in natural settings: Foundational sensory experiences (vestibular, proprioceptive, tactile) are organically available in forests and can be shaped into predictable routines that calm the nervous system and prepare for learning.
• From inclusion to integration: Designing learning environments around neurodivergent needs (sensory maps, safe retreat spots, flexible task structures) shifts schools from retrofitting accommodations to systemic accessibility.
• Balancing screen time with green time: A practical framework that pairs short digital tasks with outdoor micro-rituals (forest-adapted Pomodoro cycles, breathing and grounding practices, active reading and writing rituals).
• Implementation toolkit for schools: Lesson templates, daily regulation rituals, reflex-inhibition micro-exercises, staff training pointers, and stakeholder engagement messages that align with wellbeing and curriculum goals.

Conclusion

Schools can achieve measurable gains in attention, behaviour, and wellbeing by integrating structured outdoor routines into daily practice, particularly for neurodivergent learners. The proposed approach reframes nature not as an optional enrichment but as core infrastructure for equitable learning. Participants will leave with actionable strategies to pilot within one term, and with a coherent narrative

to advocate for policy, timetable, and campus design changes that embed green time as standard practice.

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Sherborne Developmental Movement – A Practical Exploration of Movement.

Introduction

Sherborne Developmental Movement (SDM) offers a unique opportunity to delve into the world of movement and the pioneering work of Veronica Sherborne (1922 – 1990). SDM is a movement program rooted in relational movement play. It is also based on typical motor development and through these two aspects people will develop body awareness, spatial awareness and build relationships. Veronica Sherborne herself emphasised the program's ability to address core needs, stating that SDM enables practitioners to offer movement experiences to their client group, and she stated:

"Through my experience of teaching and observing human movement, and of learning through trial and error, I have come to the conclusion that all children have two basic needs: they need to feel at home in their bodies and so to gain body mastery, and they need to be able to form relationships. The fulfilment of these needs - relating to oneself and to the other people - can be achieved through good movement teaching."

(Sherborne, 2001 p.xiii)

Who was Veronica Sherborne?

Veronica was a physical education teacher and physiotherapist from the UK and developed her own approach to movement training based on Rudolf Laban's movement analysis. Her teaching style is based on thorough observation of how children naturally play and move. Central to her approach is the attentive listening to the body to learn. It is about 'exploratory movements' instead of 'exercises' and deeply rooted in observation of movement.

As Sherborne practitioners we trace her journey from physical education teaching to devising movement experiences from which every human being, child or adult, Olympic athlete, pensioner, students at university or anybody with a severe disability, can benefit both physically, creatively, psychologically and emotionally. She has combined the best of her experience as a PE teacher, physiotherapist and mother, with Rudolf Laban's inspirational and analytical view of movement.

Main Points

During this introduction to SDM it is important that attendees realise that they are not just learning the theory of SDM but are required to do the movement for themselves. They are invited to engage with the movement experiences as an individual within the context of a partnership or within a group. This

hands-on experience will facilitate the discovery of personal and shared strengths and challenges and provide a springboard for expanding individual movement possibilities and movement variations.

"Sherborne Developmental Movement (SDM) is a form of therapeutic intervention, which seeks to engage participants in interactive learning, through movement experiences which have their origins in the normal patterns of human development. These movement experiences are presented in an environment that is open to personal response, non-judgmental and firmly rooted within the concept of achievement and success." (Hill 2006, p.8)

Sherborne Developmental Movement is a unique way of presenting movement experiences to clients/students/pupils. The main emphasis during an SDM session is to learn through doing and observing movement. SDM cannot be learned or understood from a book. There is indeed a theoretical basis to SDM, but practitioners must develop a kinaesthetic sense as well as a theoretical one. So, it is essential that practitioners engage the practical movement experiences for themselves to develop a kinaesthetic sense of SDM. This takes time so participants need to be patient with themselves. An open mind is required to embrace new and unusual physical experiences. The journey a participant takes with SDM will take them to places not yet imagined.

*"The lasting legacy of Sherborne's philosophy is not only the principles of movement, the acceptance of all persons as being valued, the importance of being at home in one's own body and the ability to form relationships through movement, but it is one of pure joy in discovery and the excitement of achievement." (*Marsden & Sparkes 2007, p.15)

During the presentation attendees will be introduced to the theory of movement analysis and how Veronica Sherborne applied it to her approach. Through the hands-on practical movement session, they will experience movement as communication and in doing so will discover how relationships can be created, and how they can be challenged through movement, with others and alone. These movement experiences will demonstrate the power of SDM in helping participants to become more aware of themselves both physically and emotionally. The benefit of this growing awareness in a participant is that their self-esteem will increase. In this session, we'll explore how the right learning environment can make a huge difference, bringing fun and enjoyment to the process of learning through movement. In the movement session we will focus on how the body moves, where it moves, the quality of those movements and with whom we move.

Conclusion

SDM empowers individuals to build self-esteem, foster positive relationships, enhance emotional and physical literacy, improve communication and creative expression, boost learning power, stimulate critical thinking, and support professional and leadership development, as well as team building.

We hope that attendees will leave feeling inspired to learn more about SDM and to explore their own personal movement journey so that they can feel more 'at home' in their own body and extend their movement vocabulary.

We have Internationally Qualified Course Leaders (IQCL) in the following countries: Belgium, Germany, Greece, Japan, Norway, Poland, Sweden, The Netherlands and UK. IQCLs can provide training across the world.

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Putting the PIECES Together: Strategies for Inclusive Early Learning

Introduction

Across early childhood settings, educators increasingly encounter learners whose developmental profiles, communication styles, and sensory experiences fall along the broad continuum of neurodiversity. While inclusion has become a core value of contemporary education, many teachers continue to feel uncertain about how to translate this ideal into effective classroom practice. The PIECES Reflective Framework, developed through international work in inclusive and strengths-based education, provides an evidence-informed, practical pathway for teachers to examine, refine, and intentionally adapt their practice to meet the needs of every learner.

PIECES stands for Programming, Planning & Assessing; Interactions & Relationships; Environment as the Third Teacher; Consistency & Routines; Experiences for Learning; and Support Services. It serves as both a reflective model and a professional dialogue tool that invites educators to move beyond diagnostic labels, focusing instead on each child's unique constellation of strengths, challenges, and contextual influences.

Main Points

The PIECES approach was created in response to teachers' need for reflection tools that are accessible, flexible, and grounded in everyday classroom realities. It emphasises professional self-inquiry rather than prescriptive procedures, empowering educators to pause, observe, interpret, and act with intentionality. The six domains of PIECES prompt teachers to consider essential questions about their practice: How do my plans reflect individual strengths? Are interactions built on empathy and respect? Does the environment calm and inspire? Are routines consistent yet adaptable to change? Do learning experiences invite curiosity and joy? And how effectively do we collaborate with families and support professionals to ensure holistic learning?

Grounded in reflective practice and influenced by Universal Design for Learning, the PIECES framework positions teachers as decision-makers who continuously evaluate the impact of their strategies. It supports meaningful differentiation, fosters collaboration among professionals, and strengthens the alignment between planning, environment, and pedagogy.

During the Bright Start Conference, participants will be introduced to three accompanying tools that operationalise the framework. The PIECES Framework at a Glance provides a one-page overview outlining each domain, its focus, and guiding reflective questions. The Reflective Practice Journal Prompts offer a series of guided questions encouraging educators to document their insights, explore new ideas, and capture practical adjustments in their daily teaching. Finally, the Inclusive Environment Checklist enables teachers to self-assess the inclusivity and accessibility of their learning spaces—considering physical layout, emotional climate, sensory factors, and social interactions.

Feedback from pilot workshops demonstrates that the PIECES framework fosters deeper professional self-awareness, strengthens teamwork, and increases confidence in inclusive planning. Teachers who

engaged with the model reported heightened sensitivity to environmental influences, improved differentiation strategies, and enhanced collaboration with support services. Leaders observed that PIECES provided a shared language for reflective dialogue and professional growth.

Conclusion

The PIECES Reflective Framework offers a pragmatic, compassionate, and evidence-informed approach to supporting neurodiverse learners. It bridges theory and practice by embedding reflection into daily teaching decisions, encouraging educators to recognise and respond to the individuality of every child. Through the framework's tools—its visual overview, reflective journal prompts, and environment checklist—teachers are guided toward intentional, strengths-based strategies that make inclusion both achievable and sustainable.

Through careful reflection using the PIECES approach, all of the individual components—Programming, Interactions, Environment, Consistency, Experiences, and Support—come together just like the pieces of a puzzle to form a complete picture of the child. This holistic perspective allows educators to understand not only how each element functions independently, but how they interconnect to reveal the full potential and unique identity of every learner.

Looking ahead, educators are encouraged to continue their reflective journey beyond the conference setting. The PIECES approach can be deepened through accredited online professional learning courses offered by *Diverse Minds, Dynamic Strengths*, on-site school consultations, and small-group reflective retreats in France (Auberge des Pensées) that combine professional development with experiential learning. Each of these opportunities is designed to strengthen educators' confidence, refine practice, and promote sustainable, inclusive education through reflection and connection.

Ultimately, PIECES empowers teachers to become reflective practitioners—professionals who refine, adjust, and innovate so that every child can thrive in a learning environment that values difference as strength. It is both a framework and a philosophy: an invitation to continually bring all the pieces together to create classrooms where every learner is seen, supported, and celebrated.

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The AI Bridge: Closing the Early Intervention Gap with Hyper-Personalized Learning for Children with Developmental Delays

Introduction

The global shortage of early intervention (EI) services creates a profound social crisis, defined by capacity constraints and financial barriers. This crisis results in wait times up to 12-24 months in Singapore and similar delays across global markets, costing children the critical developmental window. Simultaneously, high private therapy fees, which can exceed USD$250 per hour, establish a massive social inequity gap. This presentation introduces The AI Bridge: a scalable, evidence-based solution developed by Tiggie Kids to dismantle these barriers by digitizing and distributing expert knowledge to ensure every child receives hyper-personalized intervention on demand.

Main Points

This talk demonstrates how the Tiggie Ecosystem leverages a proprietary AI engine to operationalize best practices and scale access globally.
Social Mission and Impact: Highlighting Tiggie Kids' social mission in using technology to bridge the global access gap in early learning and early intervention.
Evidence-Based Operationalization: Demonstrating the method for operationalizing evidence in early childhood into practical, accessible, and high-fidelity features for parents and professionals.
Scalability & Internationalization: Showcasing the digital model's immediate applicability and confirmed adoption by users in Singapore, New Zealand, and India, confirming its global potential.
Ecosystem Use Cases: Showcasing the Tiggie App, its features, and the integrated use cases for the full ecosystem: parents, educators, and specialists.
AI Roadmap and Collaboration: Sharing Tiggie Kids' AI roadmap and outlining how the early childhood ecosystem can be an active partner in the journey.

Conclusion

The AI Bridge offers a direct and sustainable remedy to the global early intervention crisis. By transforming capacity constraints into immediate, hyper-personalized access, the Tiggie App improves caregiver competency and confidence, giving back time to professionals while ensuring the fidelity and efficacy of EI programs globally. We invite strategic partners to collaborate on scaling this proven model to achieve our goal of transforming EI access for all children with developmental delays.

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Empowered Learners, Inclusive Classrooms: Individualized Learning the Montessori Way

Introduction

Early childhood classrooms around the world are becoming increasingly diverse. Children enter with unique experiences, strengths, and developmental profiles. The concept of diversity now includes the many ways children learn, think, and interact with their environment, making it clear that the notion of a "typical" child no longer applies. Educators are therefore called to design learning environments that support individual growth, celebrate difference, and make inclusion an integral part of everyday learning. The Montessori method offers an invaluable framework for achieving this. From its origins, it was designed to meet the needs of each individual child through hands-on exploration, self-paced learning, and a thoughtfully prepared environment. This presentation explores how Montessori practices can be integrated into mainstream early childhood settings to create classrooms that are inclusive, engaging, and empowering for both children and teachers. Rather than viewing diversity as a challenge, we see it as an opportunity to enhance teaching practices and to help every child thrive.

Main Points

Diversity in ECE

Today, an estimated one in five children is considered neurodiverse, reflecting natural variations in how children think, learn, and respond to the world around them. Neurodiversity is present across all settings and communities - it is no longer the exception in our classrooms but the new norm.

Educators are therefore called to adapt their approaches to meet a spectrum of abilities. Instead of teaching to the middle, we must create classrooms flexible enough to support both the child who struggles and the one who soars. Recognizing this diversity is the first step toward inclusion; responding to it intentionally is the next. The Montessori method gives us a natural path forward.

Montessori Principles as a Model for Inclusion

Montessori education is built on the belief that children learn best when they are active participants in their learning. The "prepared environment"- calm, organized, and accessible -encourages autonomy and concentration. Shelves are low, materials are clearly arranged, and every item has a purpose. This level of structure supports all learners, particularly those who need predictable routines or reduced sensory input.

Montessori classrooms also traditionally feature mixed-age groupings. In mainstream settings, this can be adapted as mixed-ability groupings, where children of varying skill levels learn from and support one another. Younger or less experienced learners gain confidence through observation, while more advanced learners deepen understanding by modeling and mentoring. The result is a cooperative community rather than a competitive one.

The Montessori "Work Cycle"

At the heart of the Montessori approach lies the “work cycle” - a period during which children select, engage with, complete, and return activities independently. This fosters autonomy, self-regulation, concentration, and organizational skills, while keeping children productively engaged. It also frees the teacher to move through the classroom, offering individualized guidance, introducing new materials, and observing development, creating a learning environment where children thrive and educators can work one-on-one with each child.

Progressive Skill Building

Differentiation within this model occurs through progressive skill building. Each material or activity can be offered in multiple levels of complexity, allowing all children to participate at their own level. For instance, a fine motor activity such as cutting might begin with one-inch strips and progress toward cutting straight lines and, later, shapes. Pouring can evolve from beans to rice, then water, then water through a funnel. Similarly, cognitive (or early math) skills can move from matching concrete objects to abstract symbol recognition.Through such gradations, teachers can offer multiple entry points to learning while maintaining a shared classroom focus. Every child experiences success and challenge simultaneously.

Observation and Individualized Planning

Montessori education is grounded in careful observation. Teachers observe, document, plan, and then reobserve, ensuring that each child’s experiences guide the next learning step. Effective inclusion means staying within that optimal learning zone - where the child is challenged but capable. Activities that are too simple lead to boredom, while those that are too challenging cause frustration. By observing and adjusting in this way, educators can provide each child with appropriately challenging experiences that support growth, engagement, and success.

The Teacher’s Evolving Role

In this approach, the teacher transforms from a director to a guide. Instead of orchestrating every moment, the educator curates the environment, observes, and intervenes with precision. This shift is liberating. It empowers teachers to focus on quality interactions rather than constant management and fosters a classroom culture of calm engagement.

When teachers trust children with responsibility, children rise to meet expectations. They learn self-reliance, empathy, and respect for their peers. The classroom becomes a living example of inclusion in action.

Conclusion

The strategies presented in this session demonstrate how Montessori-inspired practices can help educators build inclusive classrooms that truly honour each child’s individuality. By intentionally designing environments and activities that accommodate diverse learning profiles, we can move beyond accommodation toward celebration - embracing diversity as a strength.

These are not radical or costly reforms but thoughtful, practical shifts: decluttering a classroom, sequencing materials by difficulty, observing with renewed curiosity, or planning lessons that target specific skills. Each small change contributes to a larger transformation.

For educators, this model brings renewed purpose and balance. For children, it creates a setting where learning feels natural, joyful, and deeply personal. As we integrate Montessori’s timeless insights into

today's inclusive classrooms, we reaffirm the idea that education is not about standardizing children - it is about meeting them where they are and helping them reach their fullest potential.

When we teach to the individual, we uplift the whole classroom. And when we do that, inclusion ceases to be an obligation and becomes a shared celebration of growth - for children and teachers alike.

Dr. Brandon Gilbert, Professor

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Maria Montessori Classrooms that Honor Every Child

Introduction

Dr. Maria Montessori's early work in Casa dei Bambini (Children's House), founded in 1907 in Rome's impoverished San Lorenzo district, laid the groundwork for what we now recognize as culturally responsive, inclusive, and developmentally appropriate early childhood education, at a time when education largely excluded children from marginalized urban areas and those with intellectual disabilities.

Montessori envisioned a new model of schooling—one rooted in respect, observation, and equity. She designed an environment that met each child's developmental, social, and emotional needs while celebrating their individuality. Her pedagogy affirmed that all children are capable of intellectual, moral, and creative growth when provided with the right conditions.

Montessori's early work represents a radical departure from the deficit-based models of her time, which viewed confident children as "less than" or "unready" for learning. Instead, she emphasized autonomy, sensory exploration, and self-directed discovery—foundational elements that continue to inform today's best practices in equitable education.

Montessori's vision provides a moral and pedagogical compass in an era of cultural diversity and systemic inequities. She believed education should prepare children for academic success and cultivate peace, empathy, and justice. Her approach invites educators to see beyond mere instruction—to understand teaching as an act of social transformation rooted in dignity and respect for all learners.

Main Points

The Montessori philosophy is rooted in a deep respect for the child as autonomous and capable. This belief shapes every aspect of classroom design, instructional practice, and educator mindset. Montessori's classrooms are deliberately structured to promote independence, concentration, and collaboration, embodying her assertion that "education is a natural process carried out by the child."

The Prepared Environment as an Equity Framework: The Montessori "prepared environment" was one of the earliest applications of what modern scholars term Universal Design for Learning (UDL). Every material and piece of furniture is designed to be accessible—within the child's reach, scaled to their size, and organized for independent exploration. This intentional design supports learners of diverse abilities, linguistic backgrounds, and developmental levels, eliminating barriers to participation. Montessori understood that when children have access to purposeful materials and freedom within structure, they construct knowledge at their own pace through cultural and sensory pathways.

Bias-Free Observation: Seeing Without Judgment: Montessori training requires teachers to become human development scientists. Through neutral observation, educators record what children do rather than what they fail to do. This bias-free approach prevents inequitable labeling and misidentification,

particularly for children from racially, linguistically, or ability-diverse backgrounds. Observation replaces assumption, allowing each child's unique trajectory to unfold authentically.

Individualized Instruction and Faith in the Child: Montessori's method rejects the idea of standardized, one-size-fits-all education. Instead, it honors the individuality of each learner by tailoring lessons to their developmental stage and interests. Teachers serve as guides—introducing materials, observing mastery, and adjusting supports. This structure ensures that equity in education is not about sameness but fair opportunity for growth. The Montessori concept of "freedom within limits" allows children to develop agency while engaging in work that is both challenging and achievable.

Grace and Courtesy: The Social Curriculum: A defining feature of Montessori education is its emphasis on social and emotional learning. Children practice empathy, respect, and peaceful coexistence through Grace and Courtesy lessons. These daily rituals—greeting visitors, offering help, waiting one's turn, and resolving conflicts—teach children to live and learn harmoniously within a community. Far from being mere etiquette, these lessons embody the essence of equity and inclusion. They teach children to honor difference, acknowledge emotion, and act with kindness—skills foundational to anti-bias education and social justice.

Montessori and Social Justice: Montessori education is fundamentally a social justice pedagogy. It challenges educators to dismantle prejudice and to cultivate classrooms rooted in compassion, equality, and peace. Her insistence on humility and self-reflection— "We must be humble and root out the prejudices lurking in our hearts"—remains a call to action for teachers today. Equity begins with introspection: understanding one's biases, privileges, and assumptions about what children can or cannot do. In doing so, educators create classrooms where diversity is not merely represented but deeply honored.

Conclusion

Dr. Maria Montessori's vision of education as a force for peace and equity is as urgent today as it was over a century ago. Her legacy calls on modern educators to transform classrooms into spaces where every child—regardless of race, culture, language, or ability—can thrive as their authentic self.

The Montessori model offers practical, evidence-based strategies. Montessori's pedagogy becomes a living framework for anti-bias education when applied through an equity lens. It nurtures children's intellectual and emotional development while preparing them to build inclusive, just, and peaceful societies. Montessori's belief that "education is the best weapon for peace" challenges educators worldwide to move beyond rhetoric and into action—cultivating knowledge, compassion, courage, and community in every child.

As classrooms become increasingly multicultural and multilingual, Montessori's timeless methods provide tools for navigating difference with empathy and respect. Her practices remind us that equity is not a program but a daily commitment to seeing, honoring, and empowering every child. By integrating Montessori's principles into contemporary early childhood education, we affirm her enduring truth: that education, when rooted in dignity and love, can transform not only individuals but the world itself.

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Numbers and Nature: Inviting Mathematical Thinking with Outdoor Art

Introduction

Math learning is critically important for young children, as early math skills predict later achievement (Gashaj et al. 2019; Kiss et al., 2019), and time spent outdoors is essential for the healthy development of the whole child (Frost & Sutterby, 2017). Furthermore, a substantial and growing body of research indicates that contact with nature offers numerous benefits for both physical and mental health (Sandifer et al., 2015). Thus, promoting mathematical thinking and artistic expression with natural materials during outdoor play is highly valuable for children's learning and overall well-being.

Main Points

Young children possess a surprisingly broad, complex, and sophisticated informal knowledge of math (National Research Council, 2005; Thomson et al.,2009). Consequently, their free play involves substantial amounts of foundational math as they count people, objects, and movements; explore patterns, shapes, and spatial relationships; and compare sizes, quantities, and degrees (Clements & Sarama, 2016). Mathematics spontaneously and frequently occurring as part of young children's play provides opportunities for adults to inform and extend mathematical thinking by building upon children's intellectual curiosity and disposition for investigation (Helm et al., 2023; Johnson et al., 2019). The following teacher behaviors support young children's mathematical thinking during outdoor play:

Engage children in informal math talk.

Observe and nurture mathematical interest by providing children with time and space to be curious.

Promote spatial perception.

Ask questions and give directions using language related to location (above, below, adjacent, behind) or locomotor activities (running, climbing, and jumping) to promote spatial awareness and spatial orientation.

Model mathematical language.

Integrate number sense and data by encouraging children to count, sort, measure, and display collections of natural objects using math explicit language ("What operation did you use to solve this problem?" and "5 plus 5 equals 10").

Ask questions to promote logic and build critical thinking skills.

Various types of questions serve different purposes and can be used collectively to help children explore different perspectives and articulate their own reasoning.

Inspection questions (Did you see . . .?) help children notice details, develop observation skills, and learn to identify connections.

Quantity questions (How many . . . ?) engage children in counting and measuring, which helps them make more precise, mathematically oriented reflections.
Comparison questions (How is _____ the same as the _____?) help children analyze what they see.
Investigation questions (What happens if . . . ?) prompt children to gain new information by acting.
Incorporate math tools into children's explorations.
Model and invite children to use rulers, timers, and scales to solve meaningful problems related to natural objects (leaves, rocks, sticks) used in their play.
Mathematics and art are connected through recurring patterns and structures found in the natural world, such as symmetry in leaves or butterfly wings and geometric shapes in flowers and plants. The art activities described below begin by collecting natural materials. Children gather flower petals, blades of grass, pinecones, leaves, pine needles, stones, sticks, feathers, shells, twigs, and seeds from their surroundings. These activities foster an appreciation for nature, develop fine motor skills, encourage language development, and promote mathematical thinking as children identify, discuss, count, sort, and arrange the materials collected.

Nature Collages

Apply double-sided tape or glue to a flat, sturdy surface (cardboard, tile, or wood) and arrange natural items. Or wrap the base with rubber bands and slide items underneath for a temporary display.

Mandalas and Patterns

Introduce concepts of balance and geometry by using natural items to create symmetrical and repeating patterns, such as mandalas. A mandala is a circular design, literally translating to "circle" from Sanskrit, with patterns radiating from a central point. Consider challenging children to collect a specific number of a particular nature item for each ring of the mandala.

Nature Sculptures

Build temporary 3-dimensional art using sturdy sticks, rocks, large leaves, and other natural materials, encouraging creative thinking and engineering concepts. Or press natural items into Model Magic or clay.

Conclusion

Outdoor environments and natural materials can boost early math learning by engaging children in counting, sorting, and problem-solving through nature-based art. Completing simple projects like making sculptures, collages, and mandalas using natural materials provides opportunities to pose thought-provoking questions and to integrate math concepts like numbers, geometry, and measurement into playful outdoor experiences.

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Headcams and Heartbeats

Introduction

Historically, almost everything we know about child development and early years neuroscience has come from tightly controlled laboratory studies. Yet we know that the way young children respond in an artificial environment like this, doesn't truly reflect the way that they learn and interact in the real world. For research to be helpful to early years educators, it needs to be conducted in the places where children learn, play and interact in real life.

To address this challenge, ISEY, a cutting edge child development research institute in London, have developed comfortable, wearable technology which captures what children see, hear and say, how they feel and how they move. This technology enables research to take place in children's homes, playgrounds and early years settings, providing new insights into how children experience the world around them, and how early social and physical environments affect children's development.

ISEY then work to bridge the gap between research and practice by translating these groundbreaking new findings into practical advice and strategies for those working with young children. This presentation will explain how this technology is being used across a range of innovative new projects and will explore some of the key findings from this research, including how factors such as background noise and outdoor environments influence children's stress, attention and self regulation.

Main Points

Technology can enable new insights into children's experiences and development

Research findings are more useful to early years educators if the research takes place naturalistically, in real-world early years settings

ISEY's research has identified that different environments are optimal for different children

Outdoor environments can reduce children's noise and stress levels

Children who struggled with their attention and behaviour indoors, made significant improvements when the same activities were relocated outdoors

Conclusion

Development involves complex interactions between a child and their environment. A better understanding of how environmental factors affect children, and whether they affect different children in different ways, is vital if we want to know how to support children most effectively. ISEY's research can offer new insights for early years educators as well as those designing products and services aimed at children. The way that we study child development is changing and ISEY are leading the way. Come and find out more about what this research means for your practice.

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AI in Action: Transforming Quality Improvement and Accreditation in Early Childhood

Introduction

As early childhood education (ECE) programs across the globe confront increasingly complex expectations around accountability, quality assurance, and workforce development, many are turning to innovative technologies to support their efforts. Artificial intelligence (AI), long employed in sectors such as healthcare and finance, is now emerging as a promising tool in education, particularly for automating data processes, personalizing professional learning, and aligning instructional practices with standards. This session abstract presents a case study of the Early Childhood Development Center (ECDC) at Texas A&M University–Corpus Christi (TAMUCC), which in 2025 implemented an AI-enhanced model for continuous quality improvement (CQI), educator development, and NAEYC accreditation compliance. The ECDC is a university-based laboratory school serving diverse families in South Texas and functioning as a training site for preservice educators. Like many ECE programs worldwide, the ECDC faced persistent challenges in balancing reflective, high-quality practice with the administrative demands of accreditation and ongoing staff development. AI became the bridge between these goals and sustainable, ethically grounded solutions.

The ECDC initiative offers a replicable model for international audiences seeking to navigate accreditation frameworks, improve instructional quality, and leverage AI in ways that empower rather than replace educators. It draws upon the foundational principles of CQI (Bryk, Gomez, Grunow, & LeMahieu, 2015), socio-constructivist learning theory, and emerging research on the ethical application of AI in early learning contexts (Holmes, Bialik, & Fadel, 2019). What follows are the key components of this presentation and transformation.

Main Points

AI-Powered Video Observation and Timely Reflective Practice

To address the limitations of traditional observation methods, which were often time-consuming, inconsistent, and delayed, the ECDC used an AI-powered classroom recording tool in Fall 2024. The inexpensive tool used machine learning to record classroom audio and video in real time. It tracked teachers and children and recorded evidence of developmentally appropriate practices, such as open-ended questioning, scaffolding, and prosocial behavior guidance. This allowed for real-time observation and timely reflection by teachers and coaches

Rather than relying solely on periodic walkthroughs or paper checklists, teachers at the ECDC could now reflect on recorded interactions through a learning management system. This allowed for ongoing, real-time feedback cycles with instructional coaches, supporting a more agile and responsive approach to professional reflection. Additionally, aggregated classroom data revealed important trends, such as use

of open-ended critical thinking prompts throughout the day, allowing the team to revise schedules, introduce complex questions, and redistribute materials for more robust learning opportunities. By making observational data more accessible and dynamic, the ECDC's approach not only reduced administrative burden but also strengthened teacher autonomy and reflective inquiry.

Personalized Professional Development at Scale

Building on the observation data, the ECDC introduced an AI system to support individualized professional development. Drawing from recorded classroom moments, teacher self-assessments, and coaching notes, the AI tool generated tailored microlearning pathways aligned with the NAEYC Professional Preparation Standards. These included short videos, readings, and activities that teachers could complete at their own pace were developed and loaded into the learning management system for ongoing use.

For instance, one teacher seeking to improve her culturally responsive teaching was guided to modules developed in the learning management system on family engagement in multilingual communities and integrating home languages into the classroom environment. After reviewing the relevant content and applying these strategies in a bilingual circle time, she uploaded a video of her lesson, which was reviewed collaboratively with her mentor. Eventually, with her permission, it was shared with colleagues and preservice teachers.

By Spring 2025, professional development participation had increased by 37%, and teachers reported higher satisfaction with both the content and format of learning. This enhanced model shifted professional development from a one-size-fits-all approach to a responsive, relationship-driven experience that honors the professional agency of educators while offering scaffolding aligned with their goals and practice contexts.

Streamlining Accreditation Documentation

In preparing for accreditation under the newly tiered NAEYC system (Recognition, Accreditation, and Accreditation+), the ECDC embedded an AI-powered compliance assistant into its digital documentation platform. The system cross-referenced submitted evidence like lesson plans, assessments, communications with NAEYC's ten program standards. It then categorized artifacts, flagged missing elements, and recommended actions to close gaps.

This dramatically reduced the administrative time required to prepare the portfolio, enabling teachers to contribute artifacts directly from their devices and allowing administrators to focus on instructional leadership. For example, when the system noted a lack of two-way communication evidence for Standard Seven (Families), the team implemented a biweekly "Learning Snapshot" for families and solicited feedback through digital forms. This not only strengthened accreditation evidence but also improved family partnerships.

Peer reviewers noted the clarity and comprehensiveness of the digital system during the site visit. Additionally, they praised the ECDC's commitment to transparency and innovation. Most importantly, staff reported feeling more engaged and less overwhelmed throughout the accreditation process.

Preparing Preservice Educators in AI-Ethical Practice

As a lab school, the ECDC also extended its AI integration to support preservice teacher education. University candidates accessed anonymized clips of teacher-child interactions and classroom episodes to

practice observation, analysis, and reflection. These activities were embedded into methods coursework focused on data literacy, ethics in education, and culturally responsive pedagogy.

By introducing future teachers to AI tools in a critical, collaborative, and ethical framework, the ECDC contributed to the preparation of a new generation of educators capable of leveraging technology thoughtfully. Students learned not only how to use AI for observation and feedback, but also how to protect children's privacy, engage families in digital transparency, and apply data for continuous improvement.

Conclusion

The AI integration at TAMUCC's ECDC was not merely technological, it was transformational. By embedding AI tools within a strong CQI framework and a culture of relational trust, the ECDC demonstrated how AI can be used to enhance, not displace, human-centered early education. Teachers were positioned as co-learners and co-designers, not passive recipients of data. Thus, the accreditation process became a shared, transparent journey rather than a stress-inducing task.

For international programs navigating similar challenges, limited staffing, evolving standards, increasing documentation, this model offers a replicable roadmap for implementation. Start with a shared goal, pilot ethically, and always center people over process. With the right tools and relational infrastructure, AI can support inclusive, equitable, and sustainable improvements in early childhood education systems worldwide.

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Harmonizing Inclusive Learning: A Neurological Approach in Integrating AI and Music Technology in Early Childhood Inclusive Classrooms

Introduction

Early childhood represents a period of rapid neurological and linguistic development, during which children form the foundation for communication, literacy, and cognitive growth. Traditionally, language instruction in early education has relied heavily on verbal repetition and teacher-led modeling. However, the evolving landscape of educational technology and artificial intelligence (AI) is transforming how educators approach early language learning.

Music an inherently multisensory and emotionally engaging medium has emerged as a particularly powerful complement to language instruction. Research in educational psychology and neuroscience demonstrates that music activates multiple regions of the brain associated with auditory processing, motor coordination, memory, and emotional regulation (Patel, 2019). When paired with AI, music technology can create adaptive and interactive experiences that personalize learning, enhance engagement, and support inclusive education for all children, including those with language delays or disabilities.

The growing emphasis on neuroscience-informed teaching further strengthens the case for integrating music and AI into early childhood classrooms. This approach moves beyond traditional pedagogy, using evidence from brain research to design learning experiences that align with children's natural cognitive and emotional development. In inclusive classrooms, these tools can help bridge developmental differences, support multilingual learners, and foster empathy and social connectedness through shared rhythmic and musical experiences.

Main Points

1. Neuroscience and the Power of Music in Language Learning

Music engages the brain in unique ways that overlap with the neural networks involved in Studies have shown that rhythm and melody stimulate areas such as Broca's and Wernicke's regions, which are critical for speech production and understanding (Patel, 2019). Moreover, the emotional and social components of music promote motivation, memory retention, and positive classroom climates—key elements in effective language learning.

For young children, particularly those with speech or developmental delays, music provides an alternative pathway for communication. The multisensory nature of rhythm, sound, and movement helps children internalize patterns language processing and comprehension. of language, phonemic awareness, and prosody. When these musical experiences are reinforced through technology, they can be individualized, repeated, and adapted to each learner's pace.

2. The Role of AI-Driven Tools and Music Technology

AI and music technology have expanded the possibilities of early childhood education by offering interactive, data-informed, and personalized learning environments. These innovations include:

Digital instruments and soundboards that allow children to experiment with pitch, tone, and rhythm while receiving real-time feedback.
AI-driven speech recognition and pronunciation apps that support phonemic awareness and articulation through gamified music activities.
Augmented Reality (AR) and Virtual Reality (VR) platforms that immerse learners in soundscapes, helping them connect language to emotion and environment.
Adaptive learning algorithms that analyze each child's responses to tailor challenges, pacing, and scaffolding according to developmental readiness.
These technologies are particularly effective in inclusive classrooms, where learners demonstrate diverse abilities and linguistic backgrounds. By providing differentiated support, AI systems can assist children with autism spectrum disorder (ASD), hearing impairments, or expressive language delays. The combination of musical play and AI ensures engagement across sensory modalities, making learning both equitable and neurologically stimulating.
3. Inclusive Pedagogy and Universal Design for Learning (UDL)
The integration of AI and music technology aligns closely with the principles of Universal Design for Learning (UDL), which emphasize providing multiple means of engagement, representation, and expression.
Engagement: Music encourages emotional connection and intrinsic motivation, while AI maintains attention through interactive and adaptive challenges.
Representation: Musical cues and visual feedback make abstract linguistic concepts concrete, supporting learners with different cognitive or cultural frameworks.
Expression: Children can demonstrate understanding through singing, rhythm, or movement rather than relying solely on verbal responses.
Furthermore, these tools promote peer collaboration and cultural responsiveness. Group music-making activities supported by digital instruments or shared AR spaces allow children from different backgrounds to connect through sound, rhythm, and storytelling. This fosters empathy, respect, and a sense of belonging core goals of inclusive education.
4. Practical Implementation Strategies
Successful classroom integration of AI and music technology requires thoughtful planning grounded in developmental and ethical considerations:
Teacher Preparation: Educators must receive training in both the pedagogical and technical aspects of these tools, including how to interpret AI-generated data responsibly.
Curriculum Alignment: Activities should align with early learning standards, such as the Virginia Early Learning and Development Standards (VA ELDS), emphasizing communication, creativity, and collaboration.
Family Engagement: Parents can be invited to participate in take-home music-AI activities, strengthening school-home partnerships.
Assessment and Reflection: Teachers can use AI analytics to monitor progress in speech rhythm, vocabulary use, and emotional regulation, adjusting instruction accordingly.
When implemented with fidelity, these strategies can foster inclusive, joyful, and neurologically attuned classrooms that celebrate each child's unique learning profile.

Conclusion

The convergence of AI and music technology represents a paradigm shift in how language and literacy are nurtured in early childhood education. This study underscores that music, when enhanced by AI, not only supports language acquisition but also enriches cognitive development, emotional regulation, and social interaction. Neuroscience confirms that early musical engagement builds stronger neural pathways for attention, memory, and communication, skills foundational to lifelong learning.

For educators, the implications are clear: embracing AI-music integration enables them to design developmentally appropriate, neurologically informed, and culturally responsive environments where all children can thrive. Future directions include expanding access to AI-music platforms in early learning centers, conducting longitudinal research on outcomes, and ensuring equitable access across diverse communities.

Ultimately, by harmonizing technology, music, and neuroscience, educators can move toward a truly inclusive model of learning, one that celebrates the rhythm, diversity, and potential within every child.

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Raising Resilient Children through Parent-Professional Collaboration

Introduction

The capacity for resilience—the ability to bounce back from adversity, stress, or trauma—is one of the most critical factors for long-term emotional well-being and academic success in childhood. While the development of resilience is an internal process, it is profoundly shaped by the child's external environment, specifically the stability and consistency of the key adults in their lives. The primary spheres of influence for a young child are the home and the educational or care setting. Too often, these spheres operate in parallel, missing the opportunity for synergistic impact. This presentation advocates for a paradigm shift, asserting that a coordinated, bi-directional parent-professional collaboration is the single most effective strategy for intentionally fostering and reinforcing resilient traits in children. This paper will outline the necessity and practical application of dissolving the traditional boundaries between home and school to create a unified, supportive ecosystem where resilience can thrive.

Main Points

This presentation will explore three core areas demonstrating how strategic parent-professional collaboration directly impacts a child's resilience:

Establishing a Shared Language and Vision of Resilience:

We will detail methods for parents and professionals to co-create a common definition of resilience, moving beyond vague concepts to identify specific, measurable behaviors (e.g., emotional regulation, problem-solving skills, seeking help).

Practical tools, such as joint training sessions and resource sharing, will be introduced to ensure all key adults are consistently modeling and reinforcing the same positive coping strategies, thereby removing potential sources of confusion or conflicting messages for the child.

Implementing Data-Informed and Consistent Interventions and Support Across Settings:

The presentation will highlight the importance of timely, transparent, and respectful information exchange regarding a child's response to stress, transitions, and challenges observed in both the home and the professional setting.

We will showcase examples of successful collaborative strategies, such as developing home-school programmes and joint "resilience action plans" for individual children. These plans ensure that evidence-based interventions used by a teacher (e.g., specific breathing techniques, music and movement, social-emotional lessons and calming kits) are supported and practiced by parents at home, accelerating the mastery of these critical coping skills.

Building Relational Trust as the Foundation for Collaborative Advocacy:

We will argue that effective collaboration is predicated on mutual relational trust and respectful communication, moving beyond simply scheduling parent-teacher meetings. Strategies for building this trust will include establishing clear communication protocols, using non-judgmental language, and

recognizing the unique expertise that each party brings (the professional's knowledge of child development, the parent's knowledge of the individual child).
The ultimate goal of this collaboration is to transform parents from passive recipients of information into active, informed partners and advocates. This unified front provides the child with a consistent sense of security and validation, which is the bedrock upon which long-term resilience is built.

Conclusion

Raising resilient children is not a task for one individual; it is a shared responsibility demanding a unified approach. This presentation concludes that the intentional integration of parent and professional expertise creates a "resilience amplifier," making the whole far greater than the sum of its parts. The actionable strategies presented—including co-creating a shared language, implementing consistent cross-setting interventions, and prioritizing relational trust—offer a robust roadmap for educators, administrators, and family support professionals. By committing to this deep level of collaboration, we not only equip children with the enduring skills to navigate future challenges but also establish a powerful, protective system that supports both family well-being and educational outcomes.

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From Burnout to Brilliance – transforming educator wellbeing for lasting impact.

Introduction: Are you or those on your team feeling overwhelmed and undervalued? Is stress, sickness and retention an issue in your setting? Join Rowena Hicks to explore three powerful ways to reduce stress and exhaustion, and create a happier and more stable team. Discover simple, research-informed strategies that can help you and your team to be more productive, creative, energetic and even to thrive.
We know and live the reality of the Early Years Alliance research that states "More than eight in ten (81%) were regularly stressed about a work-related issue during the month prior to the survey."
Something needs to change, and this starts with us, and becomes a culture change.
Early Years Alliance. (2021). *Stress and Wellbeing in the Early Years Sector: Research Findings*.

Main points:
Discover how identifying your most valued strengths, and those of your team can increase productivity and joy to your day.
Start to consider how you think, what you think and whether your thought life is healthy. Try identifying then journaling to change your inner critic to enhance energy and creativity.
Find the key to changing your language in your communication with a simple, and 2-word shift to reduce stress, lessen conflict and improve relationships.

Conclusion: Have you stopped to consider the symptoms of stress in either yourself or your team? What if we start to take notice, then take micro-steps of action early to put in place strategies to lessen stress, become a more healthy team, and even to thrive?
Come prepared to get involved! You will leave the session having had your assumptions challenged, agreeing not to leave without changing ONE THING, and with a sample sheet to work on both for yourself and your team. Let's not accept the current situation, we can make a difference both to ourselves, those we work with and of course, then we are our best for the children who benefit hugely.

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From Inquiry to Advocacy in Community Learning Spaces

Introduction

In early childhood education, nurturing children's curiosity through inquiry-based learning allows them to develop agency, creativity, and problem-solving skills. Within our open-concept, play-based Kindergarten classrooms, inquiry serves as the foundation for all learning experiences. This session explores how inquiry projects emerge from children's questions and observations, providing authentic opportunities for them to explore, collaborate, and express their understanding of the world around them.

Main Points

Our presentation will outline the process we use to design and implement inquiry projects that balance intentional teaching with child-led exploration. Beginning with an area of interest or a provocation, children are invited to investigate through play, discussion, and observation. Teachers act as facilitators—documenting learning through photographs, videos, and reflective conversations that capture the evolution of children's ideas.

We will share examples from current and past projects that demonstrate how children's voices and perspectives shape the direction of the inquiry. Through the integration of technology, the arts, and community engagement, children are empowered to share their discoveries and advocate for real-world needs they identify during their learning journey.

Central to our philosophy is a community approach to sharing ideas, where collaboration among children, educators, and families enhances collective learning. Participants will gain insight into our reflective process of co-constructing inquiry projects and will be encouraged to exchange strategies and perspectives on how inquiry can empower young learners across diverse contexts.

Conclusion

By emphasizing agency, collaboration, and creative expression, our approach to inquiry-based learning nurtures confident, capable, and compassionate young thinkers. This session aims to inspire educators to embrace inquiry as a pathway to deeper learning and to build professional communities that sustain reflective, child-centered practices. Participants will leave with actionable ideas for fostering inquiry, agency, and community engagement in early learning environments.

Sally Hill
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Championing Equity and Inclusion: Culturally Responsive Approaches in Early Years Education

Introduction

In today's interconnected world, early childhood settings mirror the diversity of broader society, encompassing various cultures, languages, and identities. Early years educators play a key role in promoting equity and inclusion by creating environments where every child and family feels valued and empowered to participate fully. This presentation, "Championing Equity and Inclusion: Culturally Responsive Approaches in Early Years Education," explores strategies to embed equity and cultural responsiveness in teaching and learning in early years spaces.

Culturally responsive teaching goes beyond celebrating diversity; it involves understanding each child's cultural context, examining biases, and building partnerships with families. The early years are crucial for shaping children's sense of identity and fairness, making inclusive environments a developmental necessity.

This session aims to equip educators with the understanding, tools, and reflective processes needed to identify unconscious bias, broaden representation in the learning environment, and design teaching practices that reflect and respect the cultural wealth of all learners.

Main Points

Understanding Cultural Responsiveness

Cultural responsiveness starts with recognizing each child's rich cultural identity, shaped by family and community. This awareness values multiple ways of knowing and learning. Educators must reflect on how curriculum choices, routines, and classroom interactions either affirm or marginalize these identities.

The presentation introduces the Cultural Iceberg Model as a framework for understanding the visible and invisible layers of culture. While surface elements—such as food, dress, and celebrations—are easily acknowledged, the deeper aspects, including communication styles, beliefs about learning, family roles, and emotional expression, require deeper listening and reflection. Educators explore how these aspects manifest in classrooms and respond with sensitivity. By integrating culturally responsive pedagogy, teachers create spaces where diversity is not an add-on, but an essential part of how learning unfolds.

Addressing Implicit Bias in Early Childhood

Implicit bias refers to the unconscious attitudes or stereotypes that can influence our perceptions, expectations, and interactions with children and families. In early childhood settings, implicit bias can quietly shape who receives attention, encouragement, or correction, and how behaviors are interpreted. This session includes practical strategies to address bias, including tracking children who receive attention, designing open-ended play invitations, and reinterpreting challenging behavior as communication. These strategies are anchored in a mindset of curiosity rather than judgment. Teachers are encouraged to reflect on who they naturally connect with and why, and to identify subtle patterns

that influence who gets to be seen, celebrated, or corrected. When educators are aware of these patterns, they can begin to shift practice in ways that ensure equity and belonging for all learners.

Building Authentic Family Partnerships

Family partnerships are central to culturally responsive practice. Families bring deep expertise about their children—their strengths, cultural traditions, and aspirations. Strong partnerships are built on mutual respect, trust, and shared decision-making.

This approach reframes family engagement as *co-construction*. Educators listen to family perspectives and integrate them into classroom life. Key principles include valuing every family's unique voice and ensuring communication is welcoming and two-way. When educators see families as partners, classrooms become shared spaces for learning and growth.

Creating Inclusive Environments and Curriculum

A culturally responsive classroom environment communicates inclusion through its design, materials, and interactions. Physical spaces should reflect the diversity of the community, with books, images, and resources that represent varied cultures, family structures, abilities, and identities. Beyond aesthetics, educators are encouraged to embed inclusion into daily routines and play invitations.

Culturally responsive curriculum design involves asking: *Whose stories are we telling? Who is missing?* This approach encourages educators to select materials that challenge stereotypes and invite multiple perspectives. Storytelling, music, and art become vehicles for sharing cultural knowledge, while open-ended play supports exploration across languages and experiences.

Teachers are also guided to model equitable communication—acknowledging all voices, using children's home languages when possible, and celebrating bilingualism as a strength rather than a barrier. When curriculum and environment mirror the diversity of the world, children learn that difference is not something to tolerate but something to treasure.

Reflective Practice and Action Planning

Participants engage in structured reflection to identify strengths and growth areas. Reflection prompts guide educators to notice patterns and set actionable goals, including a Cultural Audit of their classroom that allows for short-term goals like diversifying materials and adjusting communication, classroom, and learning spaces audits, and long-term goals like learning about anti-bias education and developing cultural partnerships to be developed. Culturally responsive practice is a continuous process of learning and reimagining.

Conclusion

Championing equity and inclusion in early years education is both an ethical responsibility and a daily practice. Culturally responsive teaching requires educators to see each child as a whole person—shaped by culture, family, and community—and to ensure that every learner experiences belonging, respect, and representation.

By addressing implicit bias, building authentic partnerships with families, and designing inclusive environments and curricula, educators can transform early learning into a space where diversity is celebrated, and equity is lived out.

This presentation offers not only theory but practical tools for reflection, collaboration, and action. It calls educators to commit to continuous growth—observing with curiosity, teaching with openness, and

partnering with families to create inclusive classrooms that truly reflect the richness of our shared humanity.

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Parental Involvement in Early Childhood Education: Evidence from Across the UAE

Introduction

Family engagement lies at the heart of every successful early learning experience. Around the world, research has consistently shown that when parents actively participate in their child's education, academic achievement, emotional well-being, and social competence all increase. In the context of the United Arab Emirates (UAE), where early childhood classrooms are uniquely multicultural and multilingual, family–school collaboration takes on new layers of meaning. Teachers and administrators must navigate linguistic diversity, cultural expectations, and different models of parenting while ensuring that every family feels respected and included.

This presentation explores how parental involvement is currently practiced across UAE schools, what challenges teachers face in fostering meaningful engagement, and which strategies have proven most effective in bridging home and school connections. Guided by Joyce Epstein's Six Types of Involvement Framework: Parenting, Communicating, Volunteering, Learning at Home, Decision-Making, and Community Collaboration, the study investigates how educators can build a holistic and inclusive model of partnership that empowers families from all backgrounds to support their children's development.

Beyond reporting findings, this presentation aims to inspire reflection and innovation among educators, policymakers, and community partners. It offers a vision of partnership rooted in trust, cultural understanding, and shared accountability, encouraging participants to rethink family engagement as an evolving process rather than an isolated activity.

Main Points

Research Design and Framework:

The study draws on a qualitative design involving semi-structured interviews with 50 mentor teachers representing diverse schools across the Emirates. These mentor teachers supervise pre-service educators and work closely with families, offering valuable insights into daily realities of parental engagement. Interviews were thematically coded based on Epstein's six categories, with percentage estimations calculated to reflect patterns of participation.

Key Strengths and Successes:

The data reveal an encouraging picture of high parental commitment to children's learning. Teachers consistently praised families for their willingness to collaborate, their responsiveness to communication, and their dedication to reinforcing school learning at home. Communication emerged as the strongest area of engagement, followed by Learning at Home, Parenting, and Community Collaboration. Teachers attributed these successes to strong cultural values of family cohesion and school initiatives promoting transparency and accessibility.

Challenges and Areas for Growth:

Despite these strengths, several persistent challenges limit the full potential of family–school

partnerships in the UAE: limited volunteering opportunities due to working schedules, low participation in decision-making, language and cultural barriers, unequal engagement across households, and a lack of structured parent training. These findings highlight the need for systemic strategies rather than isolated events.

Teacher Voices and Practical Insights:

Teachers' reflections captured both commitment and constraint, many parents are eager to help but face practical barriers. Examples include limited time for meetings, difficulty understanding updates in one language, and a need for clearer guidance on home learning. Teachers have responded creatively by offering short virtual meetings, bilingual newsletters, and family storytelling projects to strengthen engagement.

Actionable Strategies and Policy Recommendations:

Key recommendations include flexible meeting times and hybrid volunteering for schools; trust-building and bilingual communication for teachers; consistent home routines for parents; and integration of parental engagement in policy frameworks and teacher training at the national level.

Conclusion

This presentation invites conference participants to reimagine parental involvement as a culture of partnership, not a checklist of events. The UAE's diversity provides a rich context to explore how schools can connect authentically with families from many linguistic and cultural backgrounds.

Applying Epstein's Six Types of Involvement has proven effective in identifying areas of strength and opportunity. The research shows that while UAE schools excel in communication and home learning, greater attention to volunteering and shared decision-making can elevate parental engagement to the next level.

By embracing flexible structures, bilingual communication, and parent leadership opportunities, educators can create environments where every family, local or expatriate, feels valued and empowered. Ultimately, strengthening family and school partnerships is not just an educational strategy; it is a social commitment to the holistic development of every child.

Participants attending this session will gain evidence-based insights, practical tools, and renewed inspiration to build stronger, more inclusive learning communities within and beyond the UAE.

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The Paradox of Play: AI in the World of Early Learners

Introduction

"AI didn't emerge from logic alone, but from humanity's creative impulse — our ability to imagine, tinker, and play."
Margaret Boden, Cognitive Scientist and AI Theorist (University of Sussex)

We are living in times where AI is developing exponentially. It Edtech circles it is defined as the 4th industrial revolution, evolving at a pace we, as humans have never gone before. This creates a multitude of paradoxes in many pockets of society. Early child hood is no exception in particular within play based learning. We know from research and evidence that a play based approach to early childhood in invaluable and increasingly essential. So how do we preserve and balance it in todays, and indeed tomorrows, world?

At the heart of this conversation is the reminder that AI didn't simply arrive in our world as a surprise. It started and continues with humans. It is our ability to create and develop which enabled the idea and advancement of AI and technology in general. History shows us that the ability to play, take risks and adapt are the skills which have moved humanity forward, and these are exactly the skills we prioritise as educators.

It's crucial to remind ourselves of the value of play and where we find paradoxes within early childhood. Often these are in assessment, routine or tension between leadership priorities and the reality of an early years classroom. Play based learning can be seen as a scale covering child led, child initiated, adult scaffolded and adult led. As educators we can be moving within the scale within minutes to meet the needs of our children and our context. Play based learning is not an either / or approach, it is a mindset. Often it is our playful mindset that best equips us to work through challenges and recognise opportunities. It is time to empower our educators to be energised by paradoxes and find opportunity in contradictions. The world is full of them.

Understandably there is much concern about AI tools in early years classrooms. Research shows us that screen time and a reliance on technology can diminish other critical skills. Many of us in education leadership didn't grow up with the internet so our lived experiences of a screen-based childhood are vicariously inhabited through our children and students. Many of our concerns and opportunities are informed by our context. What is concerning in one school might not be in another. How these opportunities are managed in each context develops a culture around AI and technology. This can be one of fear and resistance or one of positivity and optimism. This can also be a mix of both. Understanding our context is the first step towards embracing and maximising the change.

The world is changing fast. But we still can control the pace. We don't need to always PLAY fast. It is critical for educators to remember it started with us and we have choice. The choice to go fast, to go slow and to stop. The choice to implement AI tools, the choice when to use screens. The choice to get to know our students and respond to their needs.

So how do we embrace this new era and hold onto all we know is important? Research in this area has been done by UNICEF with support from Lego. The 'Responsible Innovation in Technology for Children' report explores ways in which tech developers can preserve and prioritise children's well being in the way they create AI tools. Within this research we start to see the strength of the paradox in the analysis of skills and attributes to be considered. This will look different in different cultures but the message is clear, there is work to be done but it is possible. In fact, its transformative when approached with structure and integrity.

To explore this further we can take a simple activity and design it through two different approaches. The activity is to build a story around a simple prompt. The prompt is based on something meaningful in the context of the school. The first approach is through drama skills, the second approach is through digital game design. Educators can be asked to build an activity in both approaches then compare the skills they are asking the students to engage. Usually, they conclude that there are some which are the same and some which are different. Then we ask what happens when we combine these two approaches into a hybrid approach. What do we lose? What do we gain? This training activity gives educators the opportunity to compare and experiment and hopefully understand that the choice and control rests with them. At the heart of early childhood is the ability of educators to observe their children and reflect on how best to support and develop them, AI is no exception. Is the sweet spot for early learning in connecting both — designing AI that invites physical play? Or designing physical play that can extend into AI driven play?

There is much still to be discovered, we don't know what future professions might exist for our current early years children. But we don't need to be fearful, AI starts and ends with us. If AI is the product of human intelligence, play is the energy that powers it. The future belongs to those who keep both alive.

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Pause, Play, Connect®: A Toolkit for Educators and Caregivers
A Play-Fuelled Framework for Regulation, Resilience, and Relationship

Introduction
In a world of growing disconnection, emotional dysregulation, and overstimulation, professionals working with children need sustainable, responsive tools—not just strategies—to help them stay grounded and connected. This session introduces the Play Healing® framework: PAUSE, PLAY, CONNECT®, a practical, trauma-responsive approach rooted in attachment theory and polyvagal insight. This flow is designed to help children—and the adults who care for them—move from survival states into safety, curiosity, and growth. Based on over 20 years of work with families in crisis, this model is already making change happen in refugee camps, SEND classrooms, and homes across the UK.

Main Points
From Playfulness to Play-Fuelled: Understanding the difference. Playfulness may come and go, but being *play-fuelled* is a way of showing up that centres presence, attunement, and creativity—even under pressure.
The Model: A breakdown of the PAUSE, PLAY, CONNECT® flow and how each phase supports nervous system regulation, co-regulation, and relational connection.
Case Studies: From a father navigating behavioural crisis with his daughter, to a non-verbal child in a SEND setting, to over 400 Ukrainian families supported through the 1000 Feather Project — this work spans classroom, home, and community.
Culture Shift: The PPC model helps shift practice from behaviour management to body-informed, relationship-led care.
Interactive Engagement: Participants will engage in practical exercises that offer a felt experience of regulation, playfulness, and human connection.

Conclusion
Attendees will leave with a trauma-responsive, polyvagal-informed toolkit that supports both personal wellbeing and professional practice. Whether working in education, therapy, or family support, the PPC flow helps create relational safety, emotional regulation, and space for creativity.
The model aligns with frameworks such as THRIVE, Restorative Practice, and Family Hubs—while offering something unique: a language and lens for embedding attuned, playful presence into everyday life. By simplifying what it means to "be present," Pause, Play, Connect® makes wellbeing accessible, sustainable, and real.

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DramActivate!: Bringing Language to Life through Storytelling and Drama

Introduction

In the Greek EFL context, most students attend small private evening schools to learn English, following traditional classroom models. After nearly three decades of teaching, I reached a point where familiar approaches no longer inspired either my learners or myself. The need for more meaningful, embodied, and memorable language experiences led me to the world of storytelling and drama—two practices that transformed my teaching and culminated in the development of my own experiential language teaching approach, DramActivate!

Founded in 2016, DramActivate! is a creative framework that integrates drama pedagogy, process drama conventions, and interactive storytelling into EFL teaching. It aims to "activate" learning by engaging the whole learner—body, mind, and emotions—through imaginative participation. The approach builds confidence, empathy, and communicative competence while fostering intrinsic motivation and authentic use of English in context.

Main Points

This hands-on workshop invites participants to experience first-hand how storytelling and drama conventions can engage students emotionally and physically, deepening their connection to language and meaning. Through a sequence of creative activities, participants explore ways to activate imagination, build confidence, and nurture genuine communication in the EFL classroom.

The session begins with energizers and physical warm-ups such as Name in a Bucket and Buzzy Bees, which establish a playful group dynamic and lower the affective filter. It then moves into an embodied storytelling process using the Palestinian folktale Milk is for Milk and Water is for Water, originally told by 18-year-old Hala from Gaza through the Tell a Child in Gaza's Tale project. Participants co-construct and retell the story through drawing, improvisation, and role-play. Techniques such as Ten Second Statues, Role on the Wall, and Hot Seating invite learners to move from physical to emotional engagement and from comprehension to creative production.

By stepping into characters' perspectives and re-telling the story in their own words, participants experience how drama scaffolds linguistic risk-taking and storytelling confidence, even for low-level or young learners. The workshop models a progression from non-verbal participation to verbal expression, illustrating how language learning can grow organically through embodied experience rather than rote practice.

Conclusion

DramActivate! demonstrates how teachers can design lessons that are not only engaging and memorable but also personally meaningful for students. By combining storytelling, imagination, and drama conventions, educators can cultivate empathy, motivation, and authentic language use—helping learners to live the language, not just learn it. The workshop encourages teachers to rediscover their own creativity and leave with ready-to-use strategies for immediate classroom application.

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***e-MoBo*: A Social Robot Helping Young Children Recognize, Label, Express, and Regulate Emotions**

Abstract
Over the last decades, robotic therapeutic agents have been utilized to support children in developing emotional expression skills. However, when designed as human surrogates rather than relational mediators, they may inadvertently hinder healthy emotional development and social attachment. Moreover, such robots tend to be too costly to deploy widely.
We propose *e-MoBo*, a low-cost, non-humanoid 'robo-mediator' of our own design to train children's socio-emotional skills towards creating stronger relationships with others. We report on the evolving *e-MoBo* prototypes and the results of a field study with 14 neurotypical children, ages 5-9. Children who interacted with *e-MoBo* exhibited significantly more expressive verbal and non-verbal behavior than those in traditional learning conditions.
Building on insights gained from our field studies with the current prototype and normally developing children, we will inform and refine the subsequent stages of design. These efforts will culminate in the deployment of an upgraded *e-MoBo* prototype in residential centers serving traumatized children in the United States and Israel.
In an era marked by rising emotional challenges among children, from pandemic aftereffects to the overload of digital screens, *e-MoBo* emerges as a potentially groundbreaking tool bridging technology and emotional development.

Introduction

Years of research have demonstrated that parental estrangement can have lasting adverse effects on a child's attachment style, socio-emotional development, mental health, and overall well-being (Verhaar et al, 2022). These effects are particularly pronounced among children who have experienced trauma and have been removed from their home environment to be placed in residential care settings (Streeck-Fischer & van der Kolk, 2000).
While robo-therapists have been developed to help children express emotions, these systems often act as human replacements – an approach with notable drawbacks – and are also too costly and inefficient for broad deployment (Boada, 2021).
Drawing on our combined expertise in design, human-computer interaction, robotics, developmental psychology, and early childhood education, we are developing *e-MoBo*, a robo-mediator that is designed to help adults (therapists, parents, and educators) support children in developing stronger socio-emotional and communicative skills (Blair et al, 2023; Cañete et al, 2024).
The main goal of this intervention is to help children strengthen social bonds and develop trust with others – among the greatest challenges in social-emotional learning (Bowlby, 1979, 1988). Currently, our research focuses on a particularly vulnerable group: young children who have experienced trauma, such

as neglect or abuse, and have been removed from their homes. Specifically, *e-MoBo* is designed to support these children in recognizing and articulating emotions (their own and others'), expressing them more effectively to caregivers, and regulating their emotional responses to stressors within their residential environments and in everyday interactions.

Main Points

We report on field studies conducted with three early *e-MoBo* prototypes, introduce a new design that integrates their most promising features, and present findings from a subsequent field study involving 14 neurotypical children from a local pre/after-school program, conducted to assess *e-MoBo*'s readiness for future studies with children who have experienced trauma.

e, *Mo*, and *Bo*, our three early prototypes, were introduced to therapists and staff at a residential care facility for children in New York State. In addition, these prototypes were presented to children aged 4-13 at the Sciencenter in Ithaca, New York.

Based on the feedback collected from both adults and children, two key gaps were identified:

(1) the absence of conversational continuity in multimodal child–robot interaction

(2) the lack of transition from child-robot to child-adult interaction.

To address these limitations, the research team conducted an ideation session to integrate the most promising features of the early prototypes into a unified *e-MoBo* design. The updated *e-MoBo* prototype was subsequently evaluated in a field study involving fourteen neurotypical children (seven boys and seven girls) aged 5–9 years (M = 6, Mdn = 7) at a pre/after-school program in Ithaca, New York.

The study examined whether children interacting with e-MoBo's features (lights, movements, and sounds) in a therapy-like scenario would show greater willingness to express emotions toward an unfamiliar adult (an experimenter) than children in a control condition, who met the same adult but played only with the cubes and figures from the e-MoBo kit.

Children in the experimental group expressed emotions for a greater proportion of time (M = 12.33%) compared to the control group (M = 5.47%). Interaction with e-MoBo elicited positive affect (laughter, wiggling, "thumbs up," and exclamations such as "Cool!" and "This is fun!") as well as empathetic responses to the robot's negative expressions (frowning, lowered voices), while the control group remained largely neutral. On a 5-point Likert scale, the experimental group rated their experience "5 – very happy" versus a mean of 3.6 for the control group. During post-play storytelling, experimental participants also shared more concrete and personal experiences, suggesting that e-MoBo may foster emotional expression and empathy in children.

Conclusion

Based on a therapeutic simulation design, *e-MoBo*, a low-cost, non-anthropomorphic robo-mediator, shows strong potential for supporting children's socio-emotional learning, with the prospect of translating these skills to real-world contexts by helping children recognize, express, regulate, and manage their emotions.

To further establish *e-MoBo*'s therapeutic effectiveness against current alternatives we are now designing a comparative effectiveness study with four targeted conditions: *e-MoBo*, a virtual avatar of *e-*

MoBo running on a tablet, a NAO humanoid robot widely used in child-robot studies, and *e-MoBo*'s non-interactive tools (emotion cubes and role-play figures) – similar to what therapists commonly use. Looking ahead, we envision *e-MoBo* as a scalable and impactful intervention that can be integrated into homes and early childhood learning environments, fostering socio-emotional growth among both neurotypical children and those with communicative or other disorders, particularly in the context of a post-pandemic society marked by digitalization and social alienation.

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Play with purpose – Reimagining Early Learning through Sustainability

Introduction – My aim is to highlight the achievability and importance of sustainability in early learning amidst widespread funding challenges in early years and education across the UK and globally. The emphasises is on the value of fostering creativity, curiosity, and development through play for every child. Demonstrating how this can be achieved effectively, even on a low budget. Providing a fun and social workshop that is interactive and hands-on, affording an opportunity to find your inner child, and engage in a range of play with sustainable loose parts.

Main points – The workshop explores understanding the essence of play, recognising how children learn most effectively, utilising a variety of sustainable resources, and providing practical ideas for incorporating sustainable play into a range of settings. I will be exploring aspects of playwork theory and looking at playwork as an approach to offering play opportunities for children of all ages and abilities. Discussion around how you can do this in your setting and share examples from those who have adopted a more playful approach to learning. If you work in early years, primary school or beyond I will provide you with information and ideas that you can take back to your setting. We will play, share ideas and explore the value of everyday objects for play, while taking account of the practicalities of using recycled and found resources in play.

Conclusion – The interactive workshop will open you up to a creative way of thinking about play in your setting, using sustainable items to engage children in a range of play types and learning. I will bring a range of loose parts to spark conversation, creativity and ideas for play. I want to explore a different approach to play and working with children that is inclusive, and child led. My aim is for you to leave the session inspired and with a host of ideas that you can implement when you return to your setting. I have a passion for children's play and sustainability in play that I want to share my passion with everyone who attends my session.

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From Crib to Coding: How early Learning Fuels the Future of AI

Introduction:

Babies born today will come of age during the Fifth Industrial Revolution, a time when humans and artificial intelligence (AI) work together to guide technology with human empathy, ethics and creativity. Children will need the skills to compete in this advancing global workforce and these skills need to be embedded from the earliest years of life. The rapid evolution of technology requires a fundamental rethinking of early childhood education, positioning responsive caregiving, play, and executive function as the foundation for future AI fluency. There is a misconception that babies need digital toys to learn technology literacy; however, the opposite is true. As noted in the position statement on Risks of AI to Babies by Roche, et al., technology in baby toys that is built on large language models is not a substitute for the complex, dynamic interactions between babies and their human caregivers, and could potentially be detrimental to development (2025).

The World Economic Forum (2023) projects that by 2045, AI will be fully integrated into nearly every profession, functioning not as a replacement for human labor but as a co-pilot that automates routine tasks and amplifies human creativity and decision-making. Workers will be expected to direct, question, and supervise AI systems, requiring strong critical thinking, emotional intelligence, adaptability, and ethical reasoning. These "core human skills," rather than technical coding ability alone, will determine success in a world increasingly shaped by algorithms and automation (Bakhshi et al., 2021). Preparing children for this future cannot begin in elementary school; it must begin at birth, during the most critical period of brain development.

The Developing Brain

A newborn's brain contains approximately 100 billion neurons, which is more than the number of websites on the internet (Shonkoff & Phillips, 2000). The architecture of the brain is not predetermined; it is sculpted by responsive interactions with caregivers and by rich opportunities for play, exploration, and repetition. The earliest years, from birth to age five, are a period of unparalleled neural plasticity, when foundational skills for executive function, problem-solving, and self-regulation are established (Center on the Developing Child, 2011). Investing in these early experiences yields exponential long-term benefits for cognitive flexibility and innovation, the same traits required to lead the AI-driven workforce of tomorrow.

Computational Thinking Through Play

Structured and unstructured play in early childhood is critical and formative in teaching children the skills for future learning and success. Play is a child's occupation. The American Academy of Pediatrics (2021) emphasizes that unstructured, child-led play promotes creativity, problem-solving, and self-regulation, all essential to both lifelong learning and digital literacy. In essence, play is the first programming language of the human brain.

Executive Function

Executive function, a skill that encompasses working memory, cognitive flexibility, and inhibitory control, provides children with the ability to plan, focus attention, remember instructions, and manage multiple tasks successfully (Center on the Developing Child, 2011). Executive function skills enable children the ability to delay gratification, consider alternatives, and regulate their behavior, all prerequisites for ethical reasoning and effective use of technology. As AI systems become embedded in daily life, humans will be required to monitor, correct, and ethically evaluate algorithmic outputs. A strong foundation in executive function allows individuals to approach these tasks critically, resisting cognitive bias and overreliance on AI for decision-making. Early play that strengthens executive function, such as turn taking games and simple construction activities predict academic achievement and resilience into adulthood (Diamond, 2013).

Emotional Intelligence and Ethics

While technical proficiency is essential, the most in-demand skills of the AI era are profoundly human. Emotional intelligence, the ability to manage one's own emotions supports collaboration and ethical decision-making (Goleman, 2006). In the context of AI, emotional intelligence becomes a safeguard against bias and dehumanization, ensuring that technology serves social good rather than perpetuating inequality. Early childhood provides the ideal window to nurture emotional intelligence beginning with a secure attachment to a trusted caregiver. Responsive caregiving, the process of tuning in and responding to a child's emotions and needs shapes neural pathways and cultivates life skills that provide a solid foundation in emotional intelligence to use AI responsibly and collaboratively.

Conclusion/Call to Action for Early Childhood Professionals

Early childhood professionals and researchers hold a critical position in shaping this future. It is imperative that professionals help parents to understand that digital literacy does not mean introducing children to digital technology at very early ages. The warnings about screentime still apply. Human interactions and play-based learning are more important than ever in shaping young minds to be responsible and conscientious users of AI. Additionally, policymakers, educators, and practitioners must view early education as an innovation strategy, not a social service. As we stand at the threshold of the Fifth Industrial Revolution, our challenge is not to teach toddlers to code, but to nurture the curiosity, empathy, and resilience that make coding skills possible for them in the future. When we prioritize responsive relationships, play, and emotional intelligence, we are laying the groundwork for a generation that will not only manage AI, but guide it toward a more ethical, equitable, and creative world.

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Play Pedagogy in Action: Scotland's National Play Pedagogy Award©

Introduction

Across the world, educators are reflecting on how best to prepare children for an uncertain and rapidly changing future while still protecting their wellbeing, curiosity and enjoyment in learning. Scotland's response has been to place play at the centre of educational reform. Since 2013, Scotland has had a National Play Strategy (Scottish Government, 2013) that set out a vision for our country to be the best place in the world to grow up, where every child has the time, space and permission to play. That commitment deepened in 2024 when the United Nations Convention on the Rights of the Child (UNCRC) (1989) was incorporated into Scots law, placing a legal duty on government and practitioners to uphold children's rights, including the right to play set out in Article 31 (Scottish Government, 2024).

Within this national policy landscape, play pedagogy has become a driving force for change. At Play Scotland, the lead national organisation for play, we work to ensure that play is valued, prioritised and protected as both a right and a vital part of children's learning. Through our work with schools, we heard that teachers wanted to bring more play into classrooms but were unsure where to begin. Many were keen to build confidence and a shared understanding of play pedagogy that aligned with national frameworks and policy.

In response, we developed the Play Pedagogy Award (Play Scotland, 2024), working closely with teachers, headteachers, play pedagogy experts and colleagues from Education Scotland, the national agency responsible for supporting quality and improvement in education. The Award provides a clear, structured framework that helps schools embed play pedagogy within their vision, values and ethos, moving from aspiration to sustainable, system-wide practice.

Main Points

A National Framework for Change

The Play Pedagogy Award offers a guided process for schools to develop shared values around play, reflect on their practice, and design inclusive, responsive learning environments. It aligns with Scotland's Curriculum for Excellence (OECD, 2021), GIRFEC (Getting it Right for Every Child) (Scottish Government, 2022) and the UNCRC (UNCRC, 1989), demonstrating how play can act as both a pedagogical and a rights-based approach.

From Policy to Practice

Grounded in Scotland's National Play Strategy and the refreshed Play Vision and Action Plan (Scottish Government, 2025), the Award supports schools to translate national ambition into practice. It bridges policy and pedagogy, empowering schools to place play at the heart of learning.

Living Theories in Action

The approach draws on the principles of Froebel, Montessori and Reggio Emilia, which place relationships, observation and reflection at the centre of education. These enduring philosophies connect with modern understandings of child development, wellbeing and metacognition. The Award helps teachers bring these ideas to life through play-based inquiry, exploration and collaboration.

A Case Study in Practice

An example from a school in Glasgow participating in the Play Pedagogy Award illustrates how this

approach takes shape in real classrooms. A simple moment of curiosity during an autumn walk, when children spotted a squirrel, grew into a rich, term-long inquiry that connected science, technology, engineering, maths, literacy and the arts. By observing the children's interests and planning responsively, teachers saw higher engagement, collaboration and creativity. The project extended beyond the classroom, involving families and the wider community, which strengthened relationships and inclusion.

Cultural and Systemic Shifts

Embedding play pedagogy represents a cultural as well as a pedagogical shift. Teachers are becoming facilitators and co-researchers of learning, classrooms are being reimagined as flexible, creative spaces, and leaders are beginning to view play not as a break from learning but as its foundation. Play Scotland continues to support this transformation through professional learning, research and national advocacy that connects policy, pedagogy and practice.

Global Relevance

Although rooted in the Scottish context, the Play Pedagogy Award offers adaptable principles that can be applied internationally. It demonstrates how a strategic framework, grounded in children's rights and supported by national policy, can help schools across the world embed play meaningfully and sustainably in education.

Conclusion

Scotland's journey shows that embedding play pedagogy is not about introducing something new but about rethinking how learning happens. When play is recognised as both a right and a powerful form of learning, the impact reaches far beyond classrooms. Children become more confident, resilient and engaged, while teachers rediscover the creativity and joy at the heart of their profession.

This work contributes to the international conversation on child-centred education, offering a practical example of how policy, research and practice can come together to transform learning. It invites educators, researchers and policymakers to consider how play can be placed at the heart of education systems, not as a pause from learning but as learning itself, rich, relational and transformative.

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Time, Technology, and Togetherness: Co-Constructing Professional Learning in Ireland's Early Childhood Education and Care Sector

Introduction

Ireland's Early Childhood Education and Care (ECEC) sector serves children from birth to six years across voluntary and private provisions. The sector is experiencing major reform with the revised curriculum framework *Aistear* (NCCA, 2024a, 2024b) and the ongoing roll-out of free childcare for all children aged 2 years 8 months to school age (*Pobal*, 2025). While largely privately funded, families receive support through the National Childcare Scheme. Oversight spans three bodies: the Department of Education (teaching and learning), Pobal (finance), and Tusla (health and safety).

Despite progress, the sector faces enduring challenges: recruitment and retention difficulties, burnout, low pay, and complex regulation. Although the workforce holds diverse qualifications, professional learning remains limited and non-mandatory. The literature calls for professional development that is contextual, inquiry-based, and relational (Machado, & Oliveira-Formosinho, 2024). Educators' growth is most meaningful when they co-construct pedagogical intentionalities through shared purposes grounded in context and collaboration (Lyndon, 2024).

These ideas shaped a suite of professional learning initiatives by Child Paths, an Irish educational technology company: *The Learning Series*, *Webinar Wednesdays for Managers*, and a pilot *Professional Learning Community (PLC)*. Each aimed to make learning accessible, reflective, and connected.

Main Points

Programme Design and Rationale

Weekly webinars launched the initiative, supporting educators navigating curriculum and policy change and customer support. Initial sessions addressed technical issues related to Child Paths software while building community and shared problem-solving. Participant feedback revealed a strong demand for mentoring, networking, and flexibility in professional learning to accommodate time-poor educators. Building on this, *The Learning Series,* a four-part online course aligned with the updated *Aistear* combined theory and practice, reflecting adult learning principles of relevance and reflection (Knowles, 1980). Supplemental videos and reflective prompts enabled asynchronous participation. A PLC pilot for managers sought to extend peer dialogue and leadership development, but engagement patterns highlighted the limits of online collaboration given competing demands for their time.

Across all initiatives, co-construction, trust, and flexibility guided design. Participants shaped content through continuous feedback, creating a responsive, inquiry-based learning model rooted in educators' realities.

Methodology

We used a multiple case-study design. By analysing similarities and differences across cases, this method provides more robust and generalisable findings than a single case study, enabling researchers to develop or strengthen theories about the phenomenon under investigation. This approach allows for a deep, holistic understanding of how context influences a topic while still revealing patterns across different situations .

Over 420 educators, managers, and owners participated. The majority were female, reflecting workforce demographics, and many were non-native English speakers, underscoring linguistic and cultural diversity. The analytical strategy combined quantitative (distributions) and qualitative (open-ended responses and team discussions) data. Reflexive Thematic Analysis (Braun et al., 2022; Braun & Clarke, 2021; Bryman, 2008) guided interpretation, focusing on meaning-making rather than consensus. Ethical protocols followed BERA (2024) standards, ensuring informed consent and data anonymity (British Educational Research Association (BERA), 2024).

Findings

Participants rated the overall quality of sessions at 4.91/5, describing them as clear, relevant, and engaging. Six interrelated themes emerged:

Time: Time was both scarce and reflective. Asynchronous options allowed participation "*on their own time*," prompting reconsideration of "*slow pedagogy*" and time spent meaningfully with children.

Flexibility: Recordings and accessible resources supported access despite workforce shortages and unpredictable schedules.

Tutor Qualities: Approachability and responsiveness were central to engagement, highlighting the relational ethos of ECEC more generally.

Search for Knowledge: Participants sought practical, applicable learning linking pedagogy and meaning-making.

Continuity of Learning: Many valued cumulative engagement over one-off training, returning for multiple sessions.

Enjoyment: Enjoyment and connection reinforced intrinsic motivation and re-engagement.

Findings show that technology-enabled, context-sensitive learning can expand access while preserving relational depth. Yet, they also reveal the limits of Ireland's current online professional learning infrastructure. Participants valued flexibility but struggled to sustain dialogue between sessions. As such, these initiatives represent an early-stage model of online professional learning community rather than a fully operational community of practice.

Feedback loops proved crucial: participant reflections directly informed programme adaptation, demonstrating co-construction in practice. This iterative responsiveness created a dynamic learning ecosystem despite structural limitations.

Conclusion

The Child Paths initiatives demonstrate that thoughtfully designed, technology-enhanced professional learning can help address ECEC challenges of access, time, and workforce diversity. They successfully

engaged large numbers of educators, fostered reflection, and modelled flexible, inquiry-based learning. However, findings underscore that Ireland's current conditions, such as fragmented schedules and minimal system-level support restrict the development of robust online professional learning communities.

Key implications include:

Policy: Move from compliance-driven training toward contextual, sustained, and relational professional learning frameworks.

Practice: Prioritise flexibility and reflection while investing in time and infrastructure to enable collaborative online spaces.

Research: Further examine how time, technology, and relational practice intersect to shape professional identity and quality outcomes.

In sum, these initiatives show that digital platforms can widen participation and nurture reflective practice, but sustained professional learning in ECEC still depends on human connection and time for dialogue. As Ireland's ECEC landscape evolves, building capacity including technological, temporal, and cultural for genuine professional learning communities will be essential to supporting educators and, ultimately, children's early education and care.

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Strengthening Professional Identity: Redefining the Role of Early Childhood Professionals

Introduction

The early childhood education (ECE) field is undergoing a critical transformation. As the science of early development continues to affirm the profound impact of the first years of life, the role of early childhood professionals demands a corresponding redefinition. Historically, ECE has been viewed primarily through an academic lens—focused on preparing young children for school readiness and literacy benchmarks. While academic skills are important, this perspective often neglects the essential developmental, social-emotional, and health foundations that underpin lifelong learning and well-being

This presentation argues for a paradigm shift: from seeing early childhood educators as solely academic instructors to recognizing them as pediatric developmental professionals, experts who understand the whole child within a broader context of development, responsive care and intentional interactions. Strengthening professional identity in this way not only elevates the field but also ensures that children's earliest learning experiences are grounded in the science of human development.

Main Points

1. The Current Landscape of Early Childhood Education

Today's early childhood landscape is marked by increasing expectations, accountability standards, and public attention. Yet, many early educators still struggle for professional recognition, equitable compensation, and consistent support. The workforce is diverse but often fragmented, shaped by varying credentials, regulatory systems, and societal misunderstandings about what "teaching young children" entails.

2. Defining and Strengthening Professional Identity

Professional identity refers to the shared values, competencies, and sense of purpose that unite members of a profession. For early childhood educators, this identity has historically been shaped by care and nurturing roles—important but often undervalued compared to the identities of K–12 educators or pediatric specialists.

3. Shifting the Role: From Academic/Pedagogical Framework to Pediatric Development Framework

This presentation addresses the urgent need to redefine the role of early childhood professionals within a pediatric developmental framework. Traditionally, early childhood education has prioritized academic readiness—focusing on literacy, numeracy, and standardized outcomes. However, current developmental science and neuroscience confirm that optimal learning occurs when the child's physical, language, emotional, and social well-being are supported alongside cognitive growth. By shifting from an academic lens to a pediatric developmental perspective, educators become specialists in the whole child—understanding and promoting healthy child development.

This shift aligns with contemporary research from developmental science and pediatrics, which underscores that cognitive, emotional, social, and physical domains of development are deeply interconnected during the early years (Shonkoff & Phillips, 2000). A pediatric developmental framework

situates early educators as key contributors to children's health and developmental well-being, not just as academic instructors —thereby reframing early educators as essential developmental specialists within the early childhood ecosystem

Conclusion

Redefining and strengthening the professional identity of early childhood educators is not only a matter of recognition—it is a matter of impact. When educators see themselves as developmental experts, they approach teaching with deeper intentionality, advocate for the whole child, and collaborate effectively with families and other professionals.

Redefining the role of early childhood educators through a pediatric developmental framework has profound implications for practice, policy, and professional preparation. It calls for integrating child development science, health, and emotional well-being into early learning environments, ensuring that education supports the *whole child*. Educators must be trained as developmental specialists, capable of observing milestones, fostering self-regulation, and partnering with families and health professionals. Actionable strategies include revising teacher education programs to emphasize developmental knowledge, implementing interdisciplinary collaboration between education and health fields, and advocating for policies that recognize early educators as essential contributors to children's lifelong wellness and learning and, not just caregivers.

Ultimately, strengthening professional identity is both a personal and collective journey—a movement toward a more respected, empowered, and unified early childhood workforce.

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Adopting AI-powered Reading Robot to Support and Enhance Children's Reading Interest and Abilities in Early Childhood Education

Introduction

This 10-week action research project explored the adoption of Luka, an AI-powered reading robot, to support and enhance young children's interest and abilities in reading Mother-Tongue languages (Chinese, Malay, and Tamil) in three M.Y World preschools in Singapore. Luka uses image recognition, a key component of AI and computer vision, to recognise picture book pages and read stories aloud word for word. Unlike traditional digital story platforms, Luka enables children to turn pages at their own pace, creating an interactive reading experience that blends exploration, play, and learning.

A total of 77 children aged 5 to 6 years from three M.Y World full-day childcare service centres participated in the project, with a ratio of 3 to 4 children per Luka set. The project adopted the "Explore–Play–Learn" framework to capture the evolving relationship between children, Luka, and teachers over time. During the project, children's behaviours were coded into categories representing exploratory, learning, and social engagement patterns. The findings reveal a developmental progression in children's engagement with Luka from curiosity and tactile exploration to self-directed learning and increased language use in their respective Mother-Tongue languages.

Main Points

(1) Explore

Children's first encounters with Luka were characterised by curiosity and discovery. Initially, they viewed Luka as a novel toy, exploring it through touch, observation, and teacher guidance. Conversations often centred on "What is Luka?" and "What can Luka do?" During this stage, teacher mediation played a critical role in helping children connect Luka's reading functions with the storybooks.

(2) Play

As familiarity grew, Luka became a partner in playful engagement. Children interacted through listening, and responding to Luka's storytelling, often describing Luka as "fun" and "different from teachers." The robot's reading voice, musical tone, and page recognition features sustained attention longer than traditional reading sessions. Children's social interactions shifted. While peer talk decreased slightly during Luka sessions, Mother-Tongue conversations increased, signalling greater linguistic and cultural engagement.

(3) Learn

By the last week of the project, children began recognising Luka as a learning partner rather than a toy. Mother-Tongue language use became more frequent and spontaneous, demonstrating authentic language immersion. Teachers' roles transformed from information providers to facilitators of AI-enhanced learning experiences. Despite initial concerns about reduced peer interaction, children's connection with teachers remained strong, showing that the use of AI-powered reading robot did not weaken human relationships.

Conclusion

In Singapore's multicultural context, where maintaining Mother-Tongue language proficiency is both a linguistic and cultural priority, Luka created an authentic and joyful immersion environment that supported racial harmony and unity in diversity. English-speaking tendencies decreased during Mother-Tongue language lessons, and children showed renewed interest in their respective ethnic languages. The Luka Reading Project demonstrates that AI-powered tools can meaningfully support differentiated instruction and enhance early literacy when implemented with thoughtful pedagogy. Children's engagement evolved from guided exploration to independent learning, showing how the use of an AI-powered education device can scaffold the development of reading interest and linguistic ability. Ultimately, AI is not about replacing human connection. It is about amplifying it. By thoughtfully integrating tools like Luka, educators can bridge technology, language, and joy, nurturing children's curiosity, cultural identity, and lifelong love for reading.

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Meeting Families Where They Are: Navigating Hard Conversations with Compassion and Purpose

In early childhood education, strong family partnerships are essential, but they are often tested in moments of challenge. Whether discussing special educational needs, behavioural concerns, or developmental differences, early years professionals must navigate emotionally charged conversations with empathy, clarity, and cultural humility. This session equips practitioners to do just that.
Drawing on Nicola Maher's extensive experience as a SENDCO, SEND consultant, ISI Team Inspector, Youth Mental Health First Aid trainer and Chair of Governors, this workshop offers a practical framework for courageous, child centred dialogue. Participants will explore how to prepare for sensitive conversations, use language that promotes mutual respect and shared understanding, and establish strong foundations for partnership that grow as the child progresses through school. Particular focus will be given to engaging families of children with additional needs. Through real life scenarios and guided reflection, attendees will gain tools to build trust, reduce defensiveness and sustain inclusive collaboration even when perspectives differ.
The session also addresses bias, privilege, and power in school–family relationships, offering insights into how inclusive communication can strengthen outcomes for every child. Attendees will leave with renewed confidence, actionable strategies, and a deeper understanding of how to meet families exactly where they are - emotionally, culturally, and practically.

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The Marriage of Emotional Regulation Psychology with Its Physiology: Integrating Mind–Body Understanding in Early Learning and SEND Contexts

Introduction

This interactive workshop explores the dynamic interplay between emotional regulation and its physiological foundations, emphasizing how adults and children co-regulate within shared environments. In early development, a child's emotional world is tightly coupled with physiological states—such as heart rate, breathing, and digestion, making an integrated, body, mind approach essential to supporting well-being and learning readiness.

Main Points

For children with neurodevelopmental differences, such as those with Autism or Special Educational Needs and Disabilities (SEND), understanding the psychology and physiology of emotions helps educators, clinicians, and caregivers interpret behaviours not as "difficult," but as communication of internal states. The session will:

Illustrate how stress physiology (HPA axis, vagal tone, and the gut–brain connection) impacts regulation, attention, and social engagement.

Understand behaviour and emotional regulation through children's emotional and brain development.

Demonstrate co-regulation practices that support both child and adult nervous systems, fostering calm and connection in early years and classroom settings.

Provide practical, evidence-informed strategies including movement, breathing, sensory engagement, and nutrition-based supports to promote regulation and positive relational climates.

Conclusion

By integrating insights from psychology and physiology, educators and health professionals can create emotionally attuned, developmentally sensitive environments that nurture self-regulation and resilience. Participants will leave equipped with tools to strengthen their own regulation while enhancing the holistic well-being of the children in their care—helping every child feel safe, seen, and ready to learn.

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How can Initial Teacher Education (ITE) providers prepare ECE graduate teachers for AI use in early childhood settings?

Introduction

As Artificial Intelligence (AI) technologies become increasingly embedded in educational contexts, Initial Teacher Education (ITE) providers face a critical responsibility: preparing early childhood education (ECE) graduates to navigate, understand, and ethically implement AI tools in their future teaching practice. This session explores how ITE programmes can proactively respond to the growing presence of AI in early learning environments, ensuring that new teachers are not only technologically literate but also pedagogically and ethically equipped to use AI in ways that enhance, rather than compromise, child-centred learning.

Main Points

The presentation begins by contextualising the emergence of AI in early childhood education. While AI is often associated with older learners and formal schooling, its influence is beginning to permeate early learning settings through tools such as intelligent learning platforms, voice assistants, adaptive educational software, and data-driven assessment systems. These technologies offer opportunities to personalise learning, support diverse needs, and streamline administrative tasks. However, they also raise important questions about developmental appropriateness, equity, privacy, and the preservation of human relationships in early learning.

To address these complexities, the session will outline the key competencies that ECE teachers need to develop to engage with AI effectively and responsibly. These include:

Technological literacy: Understanding what AI is, how it works, and its potential applications in early childhood settings.

Critical thinking and ethical reasoning: Evaluating the implications of AI use, including issues of bias, surveillance, data privacy, and the impact on children's agency and autonomy.

Pedagogical integration: Knowing how to align AI tools with play-based, inquiry-driven, and culturally responsive pedagogies that are foundational to early childhood education.

Collaborative and reflective practice: Engaging with colleagues, families and communities to make informed decisions about AI use and to reflect on its impact on children’s learning and wellbeing.

The session will then explore practical strategies for embedding these competencies into ITE programmes. This includes curriculum design approaches that integrate AI-related content into existing courses on digital technologies, curriculum and pedagogy, and professional practice. Examples will be shared of how ITE providers can use case studies, simulations, and collaborative inquiry projects to help student teachers critically engage with AI scenarios. The presentation will also highlight the importance

of modelling responsible AI use within ITE institutions themselves, including in teaching, assessment, and student support systems.

Ethical considerations will be a central focus of the session. Participants will be invited to examine real-world dilemmas related to AI in early childhood education, such as the use of facial recognition for attendance, algorithmic decision-making in learning assessments, and the deployment of AI-powered toys. These examples will be used to prompt discussion about the values that underpin early childhood education such as relationality, equity, and holistic development and how these can guide decision-making in the face of technological change.

The session will also address challenges that ITE providers may face in preparing ECE teachers for AI use. These include limited staff expertise, rapidly evolving technologies, and the need to balance innovation with foundational pedagogical principles. Strategies for overcoming these challenges will be discussed, including professional development for teacher educators, partnerships with technology developers, and the development of guidelines and frameworks that support ethical and pedagogically sound AI integration.

Looking ahead, the presentation will consider future trends in AI and their potential implications for early childhood education. This includes emerging developments such as generative AI, emotion recognition technologies, and AI-driven curriculum design. Participants will be encouraged to think critically about how these trends might shape the future of teaching and learning, and how ITE programmes can prepare graduates to be adaptive, reflective, and ethically grounded in their responses to technological change.

Conclusion

By the end of the session, participants will have gained:

A deeper understanding of the role and impact of AI in early childhood education.

Insight into the competencies ECE teachers need to engage with AI responsibly.

Practical strategies for embedding AI-related learning into ITE programmes.

Tools for navigating ethical dilemmas and promoting child-centred approaches to AI use.

Awareness of future trends and challenges in AI and education.

This session is designed for teacher educators, programme leaders, curriculum designers, and anyone involved in shaping the future of ECE teacher preparation. It offers a timely and critical exploration of how ITE providers can support new teachers to harness the potential of AI while safeguarding the values and principles that lie at the heart of early childhood education.

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Empowering Future Educators: Ethical AI Use through Change Laboratory

Introduction

As artificial intelligence (AI) becomes embedded in educational practice, the challenge for teacher education is no longer access to tools but cultivating ethical, reflective, and confident use. In early childhood education (ECE), this is especially urgent, as teachers' modelling of technology is profoundly important in the development of young learners' digital habits (UNESCO, 2023). This study reports on an ongoing Change Laboratory (CL) intervention within a UAE higher education context, aimed at supporting pre-service ECE teachers to develop ethical AI practices through collaborative reflection and participatory design. Grounded in Cultural-Historical Activity Theory (CHAT) (Engeström, 1993; Vygotsky, 1978), the project positions ethical competence as a socially mediated and collectively constructed outcome, rather than an individual attribute.

Main Points

The Change Lab engages students and faculty in expansive learning cycles of questioning, analyzing contradictions, modelling new practices, and implementing changes (Engeström, 2007; Virkkunen & Newnham, 2013). Across five sessions to date, participants have mapped systemic tensions surrounding AI use. These include unclear institutional policies, inconsistent faculty messaging, and uncertainty about what constitutes "ethical use." Through dialogue and collaborative modelling, they have begun co-creating an Ethical AI Framework for ECE, grounded in principles of transparency, reflection, and shared responsibility.

Student-generated innovations include integrating AI-use statements in assignments, reflective journaling on ethical implications, and designing classroom activities, particularly for language support in multi-lingual classrooms. These practices represent a shift from compliance to co-creation, as pre-service teachers move from anxiety toward ethical agency. Faculty roles have likewise evolved from policing to mentoring and demonstrating, signaling a cultural transformation in how AI literacy is taught and modelled in higher education.

Conclusion

Findings indicate that participatory methodologies such as the Change Laboratory can meaningfully empower future educators to engage with AI critically and ethically. The process aligns with UAE Vision 2071 priorities for moral education, innovation, and lifelong learning by embedding ethical reflection within professional formation. As the project continues, subsequent CL cycles will expand the framework into practicum contexts, exploring how early exposure to AI ethics can inform classroom practice in kindergartens and primary schools. This ongoing work contributes to broader regional and global discussions on how ethical AI cultures can be cultivated from the ground up, through the very teachers who model learning for the youngest learners.

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Intentional Interactions

Introduction

The latest brain research revealed that the most critical years for brain development are from zero-five. According to researchers, the brain develops because of the impact of teacher-child effective interaction in the classroom, for these interactions trigging the wiring process of the brain. (Darling-Kuria, 2010). Therefore teacher-child or parent-child quality interaction is the main factor impacting cognitive development.

The Classroom Assessment Scoring System (CLASS) tool measures teacher-child quality interactions in emotional support, Classroom Organization, and Instructional Support. (Hamre, La Paro & Pianta , 2008). The Instructional Support domain measures how quality teacher-child interaction develops and strengthens cognitive functions such as concept development, critical thinking skills, quality of feedback, scaffolding, and language use. Nationwide, data have revealed that preschool teachers tend to score above the threshold in Emotional Support and Classroom Organization domains. However, the Instructional Support domain scores remain below the established target threshold. Therefore, it becomes crucial to identify a way to assist Pre-K teachers in improving Instructional Support scores. The CLASS assessment tool relies on the latest brain research, which posits that learning occurs when quality interaction between the teacher and the child. To consider any interaction to have reached the level referred to as quality, the interaction must have the following three (3) elements:

It must be intentional; the teacher must have a purpose for what they are doing;

It must be meaningful to the child, considering their interest; and

It must connect to prior knowledge and transcend it to promote future learning. (Feuerstein, 2010)

The current body of research changed the paradigm in early childhood from early care to early learning. This shift in the paradigm requires the professionalization of the early childhood workforce. To accomplish this task, researchers must understand how to support early childhood educators in connecting theory to practice in a effort to become intentional about their teaching practices (Feuerstein,2010). As exciting as all of this sounds, it requires that ECE teachers have access to professional development capable of demystifying the latest brain development research and unpacking its connection to classroom-level practice. In addition, early childhood teachers will require coach embedded professional development to solidify this new knowledge into established practice by strengthening the necessary repertoire of behaviors conducive to triggering and sustaining quality interaction in the early childhood classroom.

Main points

According to Carter (2017), there is a relationship between teachers' professional development and effective teacher-child interactions being the teacher's ability to identify quality interaction as the best predictor of effective teacher-child interactions in the classrooms. The questions then become:

1. To what extent do teaching training programs to assist early childhood teachers in connecting theory and practice?
2. What is the impact when early childhood professional development program helps teachers and leaders in linking theory and practice?
3. What abilities must teachers develop, strengthen and/ crystallize to identify and produce quality teacher-child interaction in the classroom?
4. What professional development approach is the most appropriate to ensure teachers acquire the necessary abilities to conduct effective teacher-child interactions inside the preschool classroom? (Hamre, Pianta, LaParo, 2008)

After deep review of the several articles, further research is needed to explore what teacher skill sets are better predictors of effective classroom teacher-child interactions, as well as how teacher skill sets trigger effective teacher-child interactions, Further research should also explore whether a reflective-practice approach to professional development that identifies different teacher skill sets predicts improved teacher-child interactions,

This project is to investigate the impact of the CentroNía Institute Reflective Practice Approach (CIRPA) on Pre-K teachers' ability to trigger high quality teacher-child interactions after 7 months of professional development consisting of CIRPA training and embedded coaching. CIRPA implementation will unpack for teachers the co-constructive theory and how to link to best practices The CIRPA toolkit will develop and strength teachers' competencies with the following set of tools:

Intentional Planning Lesson Format: tailored to plan teacher-child quality interaction during each part of the preschool day, incorporating open-ended sample questions

Preschool Teacher Skill Set: details the skills necessary for preschool teachers to trigger

Concept Development and offer Quality Feedback & Language Modeling.

Procedural Questions: reflective questions to facilitate teacher-child quality interaction.

Child Language Observation Tool: allows teachers to assess the language development outcomes that will result when quality teacher-child interaction is sustained throughout the day.

Conclusion

After the CIRPA coaching embedded professional development implementation it was observed increase evidence of:

Positives and intentional teacher-child interactions

Intentional open-ended questions

Conversations that assist the child in making connections

Conversations that assist the child in making meaning

This evidence makes us believe that the CIRPA toolkit implementation constitute appropriate professional development design to assist teachers to increase high quality interactions in the classroom.

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Reggio Reimagined: Transforming Learning Through Principles and Big Ideas

Reggio Reimagined: Bringing Back the Joy of Learning Through a Principles-Based Curriculum

For many of us who chose a career in education, we did so because we believe learning should be meaningful, exciting, and full of joy. Yet in many classrooms around the world, that joy has been overshadowed by timetables, targets, and testing.

The Reggio Emilia Approach offers something different. For decades, it has inspired educators globally with its child-centred philosophy, its emphasis on creativity and collaboration, and its belief in children as active, capable learners.

This workshop explores how the founding principles of Reggio Emilia can be reimagined and applied in diverse educational settings, including the UK, to build value-led learning experiences that celebrate curiosity, cultural capital, and community. Most importantly, it is about bringing back the joy of learning for both children and teachers.

Understanding the Reggio Emilia Approach

At its heart, the Reggio Emilia philosophy begins with a powerful image of the child: as capable, curious, intelligent, and full of potential. Children are not passive recipients of knowledge but co-constructors of their learning.

Another central idea is the environment as the 'third teacher'. Classrooms are not just physical spaces; they are dynamic, purposeful landscapes that spark curiosity, foster independence, and encourage exploration.

Perhaps most beautifully, Reggio champions the 'hundred languages of children,' the many ways children think, communicate, and express themselves. Through drawing, movement, building, storytelling, music, conversation, and play, children make sense of the world. Too often, schooling narrows this down to reading, writing, and arithmetic. Reggio reminds us to listen more widely and value learning in all its forms.

Realising the Difference

This philosophy stands in clear contrast to many traditional UK pedagogies, and indeed to many systems worldwide. In a typical model, learning follows a fixed sequence of instruction, often shaped by prescribed outcomes, pacing, and assessment. While structured systems can bring consistency, they often leave little space for curiosity, wonder, and deep exploration.

Reggio, however, places the child, not the curriculum, at its heart. Learning is driven by children's interests, questions, and encounters with the world. It encourages teachers to guide and provoke, rather than simply instruct.

For many schools, making this shift can feel difficult. Structural pressures, curriculum demands, and accountability frameworks can make joyful, child-centred learning seem like a luxury rather than a

necessity. But this doesn't have to be the case. By adapting Reggio principles into a structured yet flexible pedagogy, we can make this kind of learning not only possible but practical.

Reimagining Reggio for the UK Classroom

That belief shaped the development of a pedagogical model that could translate Reggio principles into UK classrooms, not just in the early years but throughout the primary phase - a value-led approach to curriculum design, one that ensures every element of learning reflects shared principles and promotes depth, connection, curiosity, and joy.

Central to this are Big Ideas: overarching concepts that guide project-based learning and inspire genuine engagement. Big Ideas give structure to creative practice, ensuring that children's curiosity isn't just encouraged but anchored in meaningful learning.

This reimagining does not water down Reggio Emilia; it honours its spirit. It gives schools a framework to make joyful, creative learning achievable within real-world constraints.

The Four Cornerstones

The Four Cornerstones grew from a desire to introduce more creativity, innovation and child-centred teaching and learning into the British classroom. Our aim was to create a structure that put joyful learning at its heart. The four stages, Engage, Develop, Innovate, and Express, guide teachers in designing coherent, inclusive, and memorable learning experiences.

Engage – Sparking Curiosity and Joy

Learning begins with a spark, a memorable event, story, or activity that captures children's imaginations and invites their voices, reconnecting everyone to the joy of discovery.

Develop – Building Knowledge and Understanding

Curiosity leads to deep, meaningful learning. Children build skills and knowledge with guidance, time, and resources, blending rigour with excitement.

Innovate – Applying Learning Creatively

Children collaborate, problem-solve, and imagine, taking ownership of their learning. Projects come alive as critical thinking and creativity shine.

Express – Reflecting and Celebrating

Children share and reflect on their learning through exhibitions, performances, or presentations. It's a celebration of achievement and a moment for reflection and assessment.

Practical Outcomes for Teachers

From the outset, our aim was simple: to build a curriculum shaped by pedagogy, not the other way around. So, this became the foundation of the Cornerstones Education Curriculum, a practical, adaptable, and inspiring approach based on the principles of Reggio and with a project-based structure which was easy to implement. To extend its reach, we developed Maestro, a digital platform that makes the curriculum more intuitive for the schools and teachers who use it. Today, this approach reaches over a million children and hundreds of thousands of teachers worldwide, growing from a classroom vision into a movement to reignite creativity and joy in education. The All-Party Parliamentary Group inquiry into *The Loss of Love of Learning (2025)* reflects a growing desire among teachers for this type of change to the British curriculum; whether that is matched by government support remains to be seen.

Conclusion

This session is an invitation: to bring joy back into learning, to trust in children's capacity to become co-constructors in their learning, and to design curriculum with principle and purpose. By combining the timeless ideas of Reggio Emilia with structured frameworks like the Four Cornerstones, we can create classrooms that are creative and rigorous, innovative and achievable, joyful and impactful.

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Out-of-the-Box Collaboration: Building a Power Mobility Play Vehicle for Inclusive Natural Settings

Introduction

Independent movement is a critical factor in the cognitive, social, and emotional development of young children. For children with significant mobility challenges, early access to power mobility devices can be transformative. However, existing commercial solutions are often inaccessible or unsuitable due to cost, lack of adaptability to fit different needs (e.g. different types of control mechanisms), transportation restrictions due to size, and geographical limits on purchase/distribution. The emPOWER Project, initiated in 2019, is a collaborative effort between volunteer engineers from the Association of Professional Engineers and Geoscientists of Alberta (APEGA) and therapists from Kids Included, a non-profit inclusive early learning organization in Edmonton, Alberta, Canada. Through grassroots collaboration across fields and disciplines, the emPOWER Project team created the emPOWER Car ™: an affordable, portable, and customizable power mobility device for children aged 12 months to 5 years. This project emerged from efforts to repair an existing and dated early power mobility device and evolved into a full design-build initiative. Engineers worked closely with occupational and physical therapists to ensure the car met therapeutic, environmental, and safety requirements. The final product is registered as a Class 1 medical device in Canada and has been used by several children in various settings. The emPOWER Car ™ vision is to be an open-source design accessible to communities worldwide.

Main Points

Who it Serves

The emPOWER Car ™ serves children with significant mobility challenges, including those with intellectual or sensory impairments and energy conservation considerations. It is used for movement exploration, skill development, play, conserving energy, and participation in everyday activities alongside peers and family members. The compact design allows caregivers to bring the vehicle to ideal environments where children naturally gather. It is not designed to be a child's sole mobility device, but rather a complement to other mobility tools. Occupational and physical therapists lead implementation by helping to tailor the car set-up to each child's needs and to ensure appropriate training and safety measures are in place.

Key Benefits

In addition to being more customizable and portable, the emPOWER Car ™ is more affordable than its closest commercially available comparators in the early power mobility market. Devices such as a power wheelchair or introductory exploration vehicles can cost upwards of $12,000 CAD. Other adapted ride-on vehicles were found to be challenging to store and transport. Currently, the supplies required to build an emPOWER Car ™ can be purchased for about $1000 CAD. The result is an accessible, versatile, and affordable power mobility device that can go wherever children and families want to go.

Using the car supports increased autonomy and exploration and helps children initiate or participate in play more easily. It is also valuable as a training tool, with successful emPOWER Car ™ use providing evidence to support access and funding for power mobility wheelchairs.

Benefits, Risks, and Safety Considerations

Benefits include enhanced cognitive and social development, improved self-confidence, and greater engagement in family, school, and community life. Risks such as tipping and environmental hazards are mitigated through therapist-led training and environmental considerations. A mandatory safety checklist and manual is provided to guide caregivers and therapists to ensure safe operation.

Families report a spectrum of responses—from immediate excitement to cautious engagement—highlighting the importance of individualized support.

Build Requirements and Cost

The plans and assembly manual for the emPOWER Car ™ will become open-source. Enlisting skilled volunteers to build the cars eliminates labour costs, and Kids Included has hosted several successful volunteer "Build Days" in which teams of engineering students, tradespeople, and others with relevant skills come together to assemble the devices.

If volunteers provide the necessary labour and machinery access, each emPOWER Car ™ can be built at a cost of only $1000 CAD for materials. Kids Included engages in fundraising activities to cover material costs and host Build Days so that emPOWER Cars ™ can be provided at no cost to families.

Conclusion

Future Directions

The emPOWER Project is a success story that demonstrates how interdisciplinary collaboration and community support can drive innovation that makes a very meaningful difference in children's lives. Future steps include expanding partnerships with rehabilitation hospitals and community agencies, creating an inter-agency lending library of emPOWER Cars ™, continuing to refine and streamline the building process, continuous development cycle product improvement, and research to validate outcomes. By sharing open-source plans and fostering grassroots change, the emPOWER Project team aims to increase early power mobility accessibility and customization.

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Neuroeducation as a Framework: Developing an AI Curriculum in Early Childhood Education

Introduction

Neuroeducation is an essential lens in supporting the understanding of how young children's brains learn best. This intersection of neuroscience, psychology, and education is essential in offering guidance for creating an AI curriculum that aligns with the current needs of early years learners (3-5yrs). During this rapid developmental stage, young learners benefit most from play-based, sensory-rich experiences that connect action, imagination, and social interaction. This session will cover the main points that integrate developmentally appropriate practice, while ethically introducing children to the world of artificial intelligence through curriculum. This session grounds the strategies in theories of development and knowledge at the intersection of neuroeducation.

Main Points

Embodied Learning Approaches: Embodied learning (also called embodied cognition in education) refers to teaching and learning approaches that connect mind, body, and environment. It emphasizes that cognition is not confined to the brain but is shaped through physical experience, movement, and sensory engagement. In early years, acting or pretending to be robots can help make abstract AI ideas concrete and memorable. As Piaget's theory underscores, preschoolers think in concrete terms, so introducing familiar examples like robots, smart toys or digital assistants before moving to simple abstractions, such as recognizing patterns or coding, supports meaningful understanding.

Curiosity-Driven Learning: Curiosity-driven learning is an approach to education that centers on a learner's intrinsic motivation to explore, question, and discover. Rather than being told what to learn, students follow their own sense of wonder through asking questions, investigating answers, and constructing knowledge through exploration and inquiry. Curiosity plays a critical role in engagement. This can be seen through applications such as AutoDraw or Quick, Draw! Where children sketch and see how AI predicts their picture. When technology produces surprising or incorrect outcomes, for example, when an app mislabels a child's drawing of a cat as a dog, children's natural questioning fosters deeper engagement and critical thinking about AI systems.

Collaborative Learning: Collaboration in ECE means learning and growing together. It involves children learning with and from each other. For example, Robot Exploration where two or more children program or guide a small AI robot (like Kibo or Bee-Bot) to move through a maze or count objects. They collaborate to give voice or motion commands, test predictions, and adjust steps. This collaboration supports children's learning by creating opportunities for social interaction, language development, and shared problem-solving. According to Vygotsky (1978), learning is a socially mediated process that occurs through interaction with more knowledgeable others, in this case, their peers.

Metacognitive Development: Through guided reflection, children develop metacognitive skills- a process where they learn to think about their own thinking. When children talk about what they learned or how they solved a problem, they strengthen memory, reasoning, and self-regulation skills, all of which are key

components of executive function and long-term academic success. Reflective prompts such as "What did you notice about how the computer listened?" nurture early metacognition, helping children develop awareness of their own thinking processes and understanding of AI interactions.

Conclusion

These neuroeducational insights demonstrate that an effective AI curriculum for early childhood should be playful, curiosity-driven, and socially rich. By grounding AI education in developmentally appropriate practices that align with how young brains naturally learn, educators can create meaningful, engaging experiences that prepare children for an increasingly digital future while supporting their holistic development.

The implications of this approach extend beyond AI education, offering a framework for integrating emerging technologies into early childhood curricula in ways that honor children's developmental needs and learning preferences. Future research should explore specific assessment methods and long-term outcomes of neuroeducation-informed AI curricula.

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Empowering Educators to Support Multilingual Learners

Introduction

As classrooms become increasingly diverse, early childhood educators must be equipped to teach multilingual learners (MLLs). Effective early childhood education depends on preparing teachers to work well with every child that comes to them. Recent research has provided the field with guidance to support full, equitable inclusion of children with diverse languages. Multilingual learners benefit when their home language is used strategically to help them comprehend content and to communicate effectively (López, et al, 2025; Banse, 2021; Nemeth, 2021). Although resources are available to help teachers work successfully with preschool MLLs, the real success depends on the development of a whole-system approach. Teachers work best when they have been well-prepared and receive ongoing training and support. School policies and curriculum decisions also contribute to a system designed to serve linguistically diverse young children. When coaches and supervisors are as well-informed as the teachers and the school team works together, we see true empowerment of educators to support MLLs in learning across all domains.

Main Points

The recommended strategies described in the research (López, et al, 2025; Nemeth, 2021; Serafini, et al, 2022) can be summarized by the following categories:

Focus on comprehension of vocabulary and content

Engage in complex conversations to help children learn new language and demonstrate existing knowledge

Build connections via responsive relationships between adults and children as well as peer connections

Collaborating with families and with colleagues to plan for teaching MLLs.

Children need to comprehend information to learn. Children need to use language to learn. Children learn by connecting new information to prior knowledge (Nemeth, 2026; Perry, et al, 2021). The whole school or program can share in facilitating multilingual learning through policies, materials, professional learning resources, and shared knowledge. The following strategies are described in several sources (Nemeth, 2026, López & Páez, 2021). They can be added to teacher education courses, coaching, and in-service training.

Strategies to help children comprehend content:

Encourage teachers to use words in the children's home languages explicitly to explain new content.

Recommend that teachers observe MLLs to determine which images and props will be meaningful to individual children.

Include copies of curriculum story books in the home languages of the children in each class and suggest that teachers and assistants read them to small groups of children in their home language before reading them in the majority language.

Strategies to support conversations:

When recommending oral language supports like open-ended questions, acknowledge that teachers need help to adapt these for children who don't understand or speak their language. One approach is to learn one or two basic questions such as "what are you making?" in children's home languages.
Provide materials and activities that support the child's interests to encourage them to use more oral language with adults and peers.
Guide teachers to provide home language and majority language supports such as classroom labels, that include nouns, verbs, and modifiers so children gain well rounded vocabulary they can use in play and learning conversations.
Strategies to support connections:
Empower teachers to fill their classrooms with displays and materials that represent the cultures and languages of the children to support learning and build a sense of belonging (Brillante & Nemeth, 2022).
Assist teachers in scheduling that allows them time for individual conversations with children, especially children who are MLLs.
Encourage teachers to model and teach strategies that improve cross-linguistic communication such as speaking more slowly, using gestures and pointing, and giving the MLL child more time to process and respond (Nemeth, 2015).
Strategies to support collaborations:
Develop policies and supports that enable teachers to collaborate fully and regularly with assistant teachers, specialists, and other school staff to provide a coordinated and cohesive program of learning for children who are MLLs.
Emphasize the importance of explicit planning for how and when to use each child's home language and when to use the majority language in play and learning.
Establish policies and resources to allow teachers to collaborate effectively with families that focus on reciprocal information-sharing and extending learning at home (Koralek, Nemeth, & Ramsey, 2019)

Conclusion

It is important to take a closer look at the content of teacher preparation courses, early childhood curriculum components, and in-service teacher training to be sure the teachers of today are ready to work with the diverse children they will encounter. We cannot expect teachers to improve their practices if these supports do not change as well. Based on the research cited herein, adaptations have been presented that university faculty, trainers, and writers can address to ensure they are properly preparing early childhood educators and leaders. When everyone involved in the design and implementation of early education has a deep understanding of language development and learning in multiple languages, all children can benefit. The most effective programs honor the languages, cultures, abilities, and experiences of every child, family, and educator.

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Hard Conversations and Building Connections in Early Childhood

Introduction

Navigating difficult conversations with families about their child's development is a vital yet challenging aspect of early childhood education. Such discussions are often emotionally charged, especially following a diagnosis of a disability. Drawing from personal experience as a parent and professional expertise, this presentation aims to equip educators with the skills needed to handle these sensitive dialogues effectively.

Main Points

- The emotional journey families often face after a diagnosis and the importance of empathy.
- Building strong, trusting relationships characterized by openness, compassion, and professionalism as the foundation for productive conversations.
- Practical strategies for initiating, preparing, and conducting sensitive discussions, whether initial, informal, or formal.
- Tailoring communication approaches to suit different family relationships and individual circumstances.
- How empathetic, well-informed communication fosters collaboration, supports family well-being, and benefits children’s outcomes.

Conclusion

When approached with empathy and careful preparation, difficult conversations can become opportunities for collaboration and support. By strengthening relationships during these vulnerable moments, educators can positively impact families and enhance children's development. Attendees will leave equipped with practical tools to navigate these challenging dialogues, ensuring they are handled with sensitivity and professionalism.

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"Ear-Resistible PD: Creating and Curating Podcasts for Powerful Educators"

Introduction

Podcasting is a 21st century media that has quickly become a major form of personal and professional learning because it provides an excellent opportunity for listeners to access a community of learning from anywhere they have access to technology. Teachers are especially likely to use podcasting as a form of professional development due the flexible nature of the medium. In fact, McNamara and Min (2024) found that podcasts appeal to teachers for several reasons: information gathering, flexibility, social interaction, entertainment, and encouragement.

These characteristics make podcasting a valuable tool for delivering professional development that would otherwise be too isolated, inaccessible, or expensive. Therefore, this research explores podcasting as an innovative, flexible, targeted, and scalable approach to teacher professional learning. Specifically, there are two areas of focus: 1) listening to podcasts for professional learning and 2) producing podcasts as an active learning strategy (Turner et al., 2023). Finally, this research examines podcasting as both a professional learning resource and a skill-building tool that fosters reflection, engagement, and collaboration.

Main Points

High-quality PD is widely recognized as a critical factor in improving teaching practice and student outcomes (AbdulRab, 2023; Corcoran, 1995; Desimone et al., 2002; Guskey, 2002; Vrasidas & Glass, 2007). PD not only enhances instructional skills but also strengthens teacher confidence and self-efficacy (Maeng et al., 2020). DeMonte (2013) outlined five characteristics that define effective PD: alignment, targeting, active learning, collaboration, and continuity. ICT-based PD can integrate these characteristics in flexible and meaningful ways. Copper and Semich (2019) demonstrated that on-demand videos offer targeted, ongoing PD. These findings suggest that podcasting aligns with the principles of effective PD and provides a viable model for continuous professional learning.

Listening to podcasts offers teachers a flexible and engaging means to access professional content at their own pace. Educators can revisit complex topics, reflect on ideas, and connect learning to classroom practice, similar to the "flipped classroom" model (Lee, McLoughlin, & Chan, 2008). Podcasts can provide background knowledge before or after instruction, supporting reflective teaching and content mastery. Plaza del Pino and Cabezón-Fernández (2025) noted that tools like podcasts are becoming increasingly common in classrooms, allowing educators to integrate learning into their daily lives. The ability to pause, rewind, or replay episodes enhances comprehension and retention (McNamara, Larocca, &

Bassett-Gunter, 2022). Flexibility also allows teachers to listen during commutes or downtime, addressing time constraints that often hinder traditional PD participation. Through shared listening and follow-up discussion, podcasts can also foster collaboration among colleagues, strengthening professional learning communities.

Beyond listening, producing podcasts encourages deeper engagement and active learning. When teachers move from consuming to creating content, they develop research, collaboration, communication, and critical thinking skills (Lee, McLoughlin, & Chan, 2008). Creating podcasts requires educators to articulate ideas clearly, synthesize research, and present content creatively. This process strengthens digital literacy and confidence while promoting reflection and metacognition (Childs, Collins, Secker, & Morrison, 2023; McNamara & Min, 2024). Teachers who create podcasts also become contributors to their professional field, transforming from passive learners to active participants in knowledge generation. Although podcast production can be time-intensive, particularly during recording and editing, modern technology has made it increasingly accessible through simple tools such as smartphones and free editing software. The collaborative and creative nature of podcast production can also build community among educators, offering new ways to share expertise and experiences.

Podcasting aligns with all five characteristics of high-quality PD described by DeMonte (2013):

It supports alignment by allowing content to connect directly to instructional goals and curriculum standards.

It can be targeted to specific content areas or professional needs, providing relevant, focused learning.

It encourages active learning through engagement in both listening and production.

Collaboration is promoted through shared listening discussions and co-production projects.

Continuity is achieved through ongoing access to new episodes and long-term content engagement.

By meeting these criteria, podcasting provides a sustainable model for professional learning that can evolve alongside educational needs and technologies.

Conclusion

Podcasting's unique combination of flexibility, personalization, and accessibility makes it a powerful tool for teacher growth. Teachers can engage in PD on their own terms, without sacrificing quality or community. Listening to podcasts offers an avenue for reflective learning and idea exploration, while producing podcasts deepens professional engagement and fosters confidence, creativity, and technological fluency. Both approaches encourage teachers to take ownership of their learning and contribute to a broader culture of professional collaboration.

Future research should further explore educators' perceptions of podcast-based PD, focusing on its impact on teaching practice, motivation, and student outcomes. Understanding how podcasting integrates within existing PD frameworks and complements other models will be critical for its effective implementation. Researchers should also investigate factors such as content quality, accessibility, and community engagement to establish best practices for podcast design and delivery. Exploring the relationship between podcast use and measurable improvements in teaching or student learning could provide valuable evidence for school leaders and policymakers seeking scalable, cost-effective PD options.

As educational technology continues to evolve, podcasting represents a sustainable, innovative, and empowering model for professional learning. By blending accessibility with the essential features of

high-quality PD, podcasting can support teachers in developing the knowledge, skills, and confidence needed to thrive in today's rapidly changing educational environment. This dual approach—combining listening and production—positions podcasting as both a learning tool and a creative outlet, transforming professional development into a continuous, collaborative, and meaningful experience for educators.

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Interviewing a 5.5-year-old child about technology

Introduction

Technology is all around us. It is crucial to investigate young children's understanding of technologies before we provide support and guidance to them and their families. This interview was conducted with a 5.5-year-old child, who attends Kindergarten and he will start Primary School in 4 months. This interview lasted 27 minutes, the child was in his house and he was browsing the book 'How Everything Works' (Gifford, 2022). He was encouraged to think of technological devices that he uses daily. Moreover, J. answered questions like what technology and artificial intelligence is and if technology is good or bad.

Main Points

The interview started with the question what technology is. J. answered "Technology is a kind of research that lots of robots are used for their brains…" During the discussion, he said that some shoes are technological, because "they have lights on the side and they light up. And they have some technological stuff on them"! J. added that a book doesn't work like a laptop, as "it's made out of paper, not out of plastic and electric stuff". When the teacher asked him what he would like to learn about, he responded "How CDs work? Are monkeys real or are they pretend in the 80s? How do engines work? How do lights works? Why do they get burnt? How do we paint so good? How do motherboards work? I have every question in your life! Someone to tell me all those questions!". When the teacher asked about the different ways he would like to learn at his Kindergarten and Primary School, first J. answered "creative knowledge…" and then he added "real books and technology"! He also said that he would like to "fix stuff". Later on, J. found a plastic microphone and he described how it works. "There is a spring inside it, a voice bounces the spring like that and then it bounces it back out". Then he found a "real" microphone with lights, buttons and cables as he said. J. added that it uses Wi-Fi and he can control it! Then he shared how cables work saying "cables are like slides… The signal slides down through the cables". While they were talking about batteries, J. added "if it has solar panels, it would charge forever!" Later on, when they noticed a screw, the teacher asked him if a screw is a type of technology. J. agreed and added "because you make stuff with it and you make it strong! And how do you make it strong? Because it's technology!" When he was asked if technology is good or bad, J. answered that it is good. The teacher asked him later if people can use technology in a bad way. J. thought about it and replied "only for bad robots. You make bad robots out of technology… they kill people!" Later, he added "the only thing I know that is not good is that" pointing at smoke coming out of factories. The teacher asked him if people could use the phones or the tablets in a bad way and J. answered "oh I know! Taking pictures of other people's faces without asking!" J. was asked if he knew what AI (Artificial Intelligence) or Chat GPT is and he replied that he knew 3D printer. Then he explained what artificial intelligence is saying "when you hide, and the other guy knows what you're trying to hide from". When the teacher asked him about Alexa (Alexa Voice Service), J. responded that "Alexa answers questions, even adds songs that you want and uses Artificial Intelligence". After the teacher's question if he trusts Alexa, J. replied that "Only if it's broken, I wouldn't trust it. Because then it would say things upside down… the

opposite…" In addition, the teacher asked J. if he knew what GPS (Global Positioning System) is. J. said "that's Artificial Intelligence. Because it talks through your phone. There is a small face …robot in your phone so tiny that you can't see, it's about the size of a germ, it doesn't sting because it's in the phone, how it can get out?" While J. was talking with the teacher and browsing the book, there were mentioned up to 30 technological devices. He shared his interest in opening old devices with his parents and collecting components such as motherboards. Moreover, J. enjoys coding and programming robot toys as he mentioned.

Conclusion

In this interview J. shared his understanding about technology and technological devices that he uses or observes others using them in his environment. The teacher used questioning techniques, a book and items around the house to stimulate J.'s thinking, promote discussion and check his understanding about technology. It is clear that this child tries to make sense of the technological world around him through a dynamic process involving cognitive growth, curiosity and the use of stories and imagination. It is important for the adults in his environment to analyse the information J. has shared in order to guide and support him learn using technology mindfully.

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Upsetting the Apple Cart of Education: U.S. School Leaders' Perspectives of Introducing Montessori in Public Schools

Introduction:

Montessori programs in public school districts are successful and popular, but rare. This study investigates how district leaders make decisions about alternative models for school reform, using Montessori as a focus. This study addresses the following questions: 1) What are the needs in the school district that Montessori could potentially address? 2) What questions would school district leaders need answered about a new curriculum, like Montessori, to consider its implementation? Interviews and focus groups were conducted with 11 leaders from eight school districts. Using the lens of institutional theory, we suggest that the constraints district leaders face when considering alternative models are primarily normative and cultural-cognitive, but that regulative solutions can play a key role in addressing them.

Main Points:

District leader decision-making was a key component to the acceptance, advancement, and sustainability of introducing Montessori to a school district. However, every district leader represented a district that serves its local constituents who had varying knowledge of Montessori and its benefits. Therefore, Montessori adoption is a process that involves the following: leader understanding, local context, and adoption and implementation.

Leader Understanding

Leaders describe their prior knowledge of Montessori as limited and recognize the need to educate themselves about the pedagogy. Exposure as a Montessori parent or relative is common and helpful, but limited

Local Context

Leaders have to consider what's going on in their district and their community; how will this program fit with existing initiatives and priorities? How will the community respond? Funding possibilities and constraints are a significant factor.

Adoption & Implementation

Leaders had questions about how to provide initial Montessori training for teachers and ongoing professional development, in the context of district-wide professional development initiatives. Facilities can be a barrier– when districts don't have empty classrooms, they may be hesitant to start a new Montessori program.

Conclusion:

This study explored perceptions and challenges faced by American public school leaders when considering Montessori as a model for school reform. It investigated the needs Montessori could address, key questions school leaders have about implementation, and the barriers and supports in introducing this alternative curriculum. Participants will gain insight into public school leaders' views on Montessori's potential and practical considerations for integrating it into public education.

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Inclusive Education & Practices in Early Childhood-Autism & SEND

Individuality and Uniqueness:
Every child is born with a unique blend of abilities, skills, emotions, and learning styles. No two learners are alike, and education must honour this diversity.
As the saying goes, *"Everybody is a genius, but if you judge a fish by its ability to climb a tree, it will live its whole life believing it is stupid."* Quoted by Albert Einstein. Inclusive education begins by recognizing this truth—by celebrating difference rather than comparing learners to a single standard.
What Is Inclusive Education?
Inclusive Education means that *every child learns together*—regardless of ability, background, or need. It is built on the principles of accessibility, participation, and belonging.
Rooted in UNESCO's Salamanca Statement (1994) and UNCRPD Article 24, inclusion calls for removing barriers and enabling full participation for all learners.
Globally, more than 240 million children live with disabilities, and half remain out of school (UNICEF 2021). Inclusive systems address this gap by ensuring that learning environments are flexible, equitable, and welcoming.
Early Childhood – The Foundation Years
The years from birth to eight form the cornerstone of lifelong development. During this period, the brain develops at extraordinary speed—90% of brain growth occurs before age 5. Early inclusion nurtures empathy, peer acceptance, and social skills, laying the groundwork for belonging and lifelong learning.
Key principles for early childhood inclusion include:
Play-based learning to encourage creativity and curiosity
Predictable routines that offer security and structure
Visual supports and sensory tools to aid understanding
When inclusion starts early, children learn that differences are normal—and friendship, collaboration, and kindness become natural.
Diverse Learners in the Inclusive Classroom
An inclusive classroom is one where *all* students learn together. Teachers focus on abilities, not disabilities, and adapt lessons to different learning styles. Support staff assist in delivering lessons, ensuring no learner is left behind. Such classrooms:
Value diverse cultures and perspectives
Celebrate individuality
Build mutual respect and empathy
Teachers continually expand their skills, differentiate instruction, and connect with learners personally. The question often asked—*"Is an inclusive classroom possible?"*—is answered daily by educators who see progress, engagement, and joy among diverse learners when inclusion is practiced intentionally.
Universal Design for Learning (UDL)

Universal Design for Learning is a framework that ensures the curriculum is accessible and meaningful to all. It emphasizes Accessibility, Availability, Acceptability, and Adaptability in both design and delivery.
UDL integrates the *what*, *how*, and *why* of learning:
What we teach – clear, flexible content
How we teach – multiple methods of instruction
Why we teach – purposeful engagement that connects with each learner
Through UDL, teachers create lessons that accommodate auditory, visual, and kinesthetic learners alike, making learning an inclusive experience rather than a privilege.
Understanding Autism (ASD)
Autism Spectrum Disorder (ASD) is a neurodevelopmental difference, not a disease. It affects communication, social interaction, and how individuals process information. Each autistic learner experiences the world uniquely, with distinct strengths and challenges.
Strengths: strong memory, attention to detail, pattern recognition, logical thinking, honesty, and creativity in technical or visual fields.
Challenges: difficulty with abstract thinking, changes in routine, sensory regulation, and social communication.
Inclusive Strategies:
Visual schedules and structured routines
Simplified, literal communication
Sensory-friendly spaces or “calm-down corners”
Peer-buddy systems for social support
Positive reinforcement for effort and progress
According to the CDC (2024), one in 36 children is identified with autism—underscoring the need for responsive classrooms where differences are respected and supported.
Supporting SEND Learners
SEND stands for Special Educational Needs and Disabilities, encompassing students who require additional or specialized support. Their needs fall broadly into four categories:
Cognition and Learning – e.g., Dyslexia, Dyscalculia
Communication and Interaction – e.g., Speech delays, Autism
Social, Emotional and Mental Health (SEMH) – e.g., ADHD, anxiety
Sensory or Physical Needs – e.g., Visual or hearing impairments
Each learner’s journey is guided through an Individual Learning Plan (ILP)—a personalized document outlining strengths, specific goals, and targeted strategies.
For example:
Goal: Improve reading comprehension within eight weeks.
Strategy: Visual story maps and guided reading three times weekly with teacher assistance.
Support: Special educator and parent reading log.
Early intervention through ILPs can improve outcomes by up to 30% (OECD). These plans foster accountability, collaboration, and measurable progress.
Inclusive Teaching Strategies

Effective inclusive teaching blends UDL, differentiation, and assistive technology. Teachers employ visual aids, sensory play, scaffolding, prompts, and adaptive assessments.
Key elements include:
Curriculum adaptation or modification
Behavior management integrated into lessons
Use of reinforcement and consequences
Regular progress tracking
Home-school partnership for continuity
Example: using picture schedules to reinforce routine or sand timers to help manage attention spans.
When teachers adapt lessons this way, learners feel empowered and capable.
Collaboration Matters
Inclusion thrives when teachers, parents, and specialists work as one team.
Open communication—through logs, home visits, and review meetings—ensures continuity between school and home.
Regular Child Study, Meetings, track progress and adjust strategies. According to a Harvard study, parental involvement increases student success by 50%. Collaboration creates a safety net where every learner is supported by both educators and family.
Global and Regional Frameworks
Inclusive education is now embedded in global and national policy:
UNESCO Inclusive Education Guidelines (2020)
UAE KHDA Inclusive Education Framework (2019)
Tanzania Inclusive Education Policy (2018)
All align with Sustainable Development Goal 4: Quality Education for All, reaffirming the world's commitment to equity and lifelong learning.
Future Directions
Education continues to evolve toward innovation and empathy.
Emerging priorities include:
Assistive technologies such as AI speech tools and interactive learning apps
Early community interventions to identify and support at-risk learners
Integration of inclusion modules in teacher education programs
Empathy-driven leadership that models inclusive values at all levels
A 2025 WGSN Education Report found that 70% of educators now use at least one digital inclusion tool—signalling a shift toward technologically enhanced, student-centred learning.

Conclusion

Inclusive education is not a program—it is a promise.
It reflects a belief that *every child deserves a seat, a voice, and a future.* Inclusion demands creativity, compassion, and continuous learning from teachers, families, and communities alike.
When schools embrace inclusion, they do not merely change classroom structures—they transform mindsets, enabling every learner to feel valued and capable. As Dr. O. Ivar Lovaas wisely said:
"If a child cannot learn the way we teach, we must teach the way they learn."

Key Takeaway

Inclusion is not about fitting children into existing systems—it is about reshaping systems so all children belong. Through individualized support, collaborative practice, and empathy-driven innovation, we create schools that reflect humanity's greatest strength: its diversity.

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Smart Philanthropy and Scalable Systems: How AI Can Democratize Early Learning

Introduction

As education systems around the world confront the challenge of ensuring equity and access, the intersection of artificial intelligence (AI) and early childhood development (ECD) presents both an unprecedented opportunity and a profound responsibility. Despite global commitments, millions of young children still lack access to quality early learning due to systems that remain costly, fragmented, and difficult to scale.

This presentation explores how technology, data, and human-centred design can work together to democratize early learning, transforming how quality education reaches even the most resource-limited environments. Drawing from the experience of The Unlimited Child one of Africa's largest ECD initiative having supported more than 2.5 million children and 12,000 women-led micro-enterprises this keynote demonstrates how AI-enabled systems and smart investment can bridge global inequities in access, quality, and sustainability.

Main Points

1. Smart Investment in Human Potential

Meaningful transformation in ECD does not begin with funding size but with strategy. Smart Investment or Smart Philanthropy refers to using capital to build frameworks rather than fragments, ensuring that resources strengthen system intelligence, not dependency. This approach uses the 3-I System investing Intelligently (guided by data and evidence), Intentionally (by design and alignment), and Iteratively (through adaptive learning).

When The Unlimited Child received the Khalifa Award for Education (2024), the funding became catalytic rather than just celebratory. It accelerated three key system-building areas:

Data Infrastructure: A live analytics environment integrating ECD practitioner dashboards and outcome data.

Digital Ecosystem: The Unlimited Child App, featuring AI-driven mentorship, adaptive feedback, and offline assessments.

Cost Efficiency & Replication: Advanced cost modelling to lower marginal cost per child while maintaining quality, enabling replication across multiple countries.

2. The Model and Its Outcomes

The Unlimited Child model rests on four interconnected pillars: skills development training, resource and toy provisioning, mentoring and coaching, and micro-enterprise development. Together, these pillars unlock the care economy by transforming informal childminders into qualified practitioners and ECD centres into sustainable community enterprises. Independent research shows that 83 % of children in the programme are developmentally "on track" for school readiness, almost double South Africa's national average (≈ 42 %). This progress demonstrates the model's ability to deliver measurable outcomes at population scale.

3. Building Quality at Scale through Digital Systems

At the heart of the programme is the practitioner, the adult who shapes each child's early learning experience. Every digital tool exists to support their professional growth and confidence.

The organisation's Learner Management System (LMS) provides scalable, structured professional development, while a Digital Tools Library standardises monitoring instruments, self-assessments, and quality checklists across all countries. These elements converge in the AI-powered Dual-Lens Quality Improvement Loop, which pairs practitioner self-reflection with structured observation by Impact Coaches. Data are analysed automatically to produce personalised development plans and direct practitioners to micro-learning modules that address individual growth needs.

These practitioners also use digital dashboards to monitor compliance and progress, supporting ECD centres on their journey to registration and quality improvement. The system turns data into action, every insight becomes a decision; every data point, an opportunity for growth.

4. How AI Can Democratize Early Learning

This digital ecosystem shows how AI can democratize access to quality early learning. By translating insights into action and providing personalised support at scale, AI bridges the gaps once created by geography, income, and infrastructure. Practitioners everywhere can access the same real-time guidance as those in advantaged centres.

AI's true value lies not in replacing people but in amplifying human potential, turning access into equity, and equity into opportunity.

5. Lessons for System Builders

From this journey, three transferable principles emerge:

Integrate, don't duplicate. Align data, delivery, and development in one ecosystem to ensure efficiency and consistency.

Design for adaptation, not replication. The model must hold steady, but methods must flex to context and community realities.

Embed feedback as a feature, not a phase. Build systems that learn as they grow—where data continually drive improvement.

Conclusion

The Unlimited Child's evolution illustrates that AI and ECD are not parallel pursuits they are mutually reinforcing forces capable of reshaping access, quality, and equity. Through smart investment, system design, and cross-sector collaboration such as partnerships with the Khalifa Award for Education, AI-enabled systems can transform ECD into a democratized, data-driven, and human-centred platform for every child's potential.

The future of early learning will not be built by one organisation or one innovation. It will be built through partnerships that connect people, ideas, and technology ensuring that every child, everywhere, has the opportunity to thrive.

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Lion Breathing with Robots: Exploring Early Childhood Practitioner and Child Experiences with an AI Social Robot in a UK Preschool

Introduction

Artificial intelligence (AI) offers new opportunities to enhance personalisation in education (Department for Education, 2025). One emerging tool is an AI social robot, an embodied technology designed to engage children in natural, real-time conversations.

International research has shown that social robots can support communication and language (Georgieva-Tsaneva et al., 2023), play across multimodal contexts (Samuelsson, 2023), cognitive, social, and emotional development (Lee et al., 2025; Mifsud et al., 2025), and interventions for children with autism spectrum disorder (Gómez-Espinosa et al., 2024; van den Berk-Smeekens et al., 2022). However, research involving AI-powered social robots remains limited.

The Department for Education (2025) has emphasised the need to examine both the benefits and risks of AI in educational contexts. This study therefore explores the experiences of preschool children and practitioners engaging with an AI social robot in a UK setting. Grounded in Bronfenbrenner's Ecological Systems Theory (1986) and Vygotsky's Zone of Proximal Development (1978), it positions the robot within the child's social and developmental ecology, as a mediating tool that may enhance learning and inclusion while emphasising the ethical, technical, and pedagogical dimensions of its use.

Main Points

Theoretical Framework

Bronfenbrenner's framework highlights that AI integration in early education is not merely technological but also relational and ecological. It informs the analysis of child–robot interactions by recognising how practitioner perceptions, training, digital infrastructure, and developmentally aligned AI design collectively shape these experiences.

Methodology

The study adopted a qualitative, exploratory design using a Mosaic Approach (Clark & Moss, 2017), which gathers children's perspectives through multiple methods, including observation, interviews, and creative activities.

Participants: One preschool class; four children aged four (video observation), and two early years practitioners.

Setting: One UK preschool classroom.

Duration: Four sessions conducted over a one-month period.

Methods: Video observations, semi-structured practitioner interviews, and child-led book-making reflections.

Data was analysed thematically to identify recurring patterns and emerging themes. Ethical procedures followed the University of Chester's framework, ensuring informed parental consent, ongoing child assent, participant anonymisation, and secure data storage.

Findings

The findings showed that child-robot interaction fostered positive participation in most children, engaging them cognitively, emotionally, and behaviourally.

Cognitive Engagement

Children showed curiosity and problem-solving while interacting with Moxie. Peers helped resolve commands when Moxie delayed responding. Children chose discussion topics and answered questions. The robot facilitated storytelling and follow-up questions.

Emotional Engagement

Most children responded to Moxie with excitement, empathy, and curiosity, while a few displayed an initial cautious hesitation. Observations captured laughter and engagement as children described Moxie as “sad” or “happy” in response to its expressions. Although most responses were positive, one child appeared frightened by the robot. These findings suggest that anthropomorphism shapes children’s perceptions of AI social robots, underscoring the importance of developmentally aligned design (Kurian, 2025) and AI literacy education (Su & Yang, 2024) to foster emotional understanding and boundaries.

Behavioural Engagement

Children demonstrated sustained attention and active participation in various activities, including breathing exercises, physical exercises, storytelling, and drawing. The robot’s design and interactive face encouraged communication and language, physical movement, and mindfulness.

Practitioner Perspectives

Practitioners initially expressed scepticism about introducing AI into the preschool classroom, particularly about concerns that it would replace human interaction. However, both practitioners recognised the robot’s potential to enhance rather than replace teaching practice.

They reported increased participation from a shy child and from an English as an Additional Language (EAL) learner. These findings suggest that the robot could serve as a mediating partner in a low-pressure environment. It may encourage dialogue without fear of judgment.

Practitioners also highlighted the need for adult scaffolding to guide purposeful use, not just to keep children occupied. The triadic relationship between child, practitioner, and robot was central to successful interactions. This demonstrates a need for training to support implementation.

Technical and Ethical Considerations

There were difficulties with speech recognition and infrastructure reliability. Practitioners noticed that Moxie sometimes misheard children’s quiet voices or responded too soon. This shows the need for better child-sensitive speech recognition and more reliable infrastructure.

Limitations in AI infrastructure underscored the need for systems calibrated to children’s developmental stages (Kurian, 2025). While the robot offered age-appropriate sensory engagement and prompted meaningful dialogue, its language processing was insufficiently adapted to young children, leading to occasional comprehension difficulties. Speech recognition issues further complicated natural interaction. Although children distinguished between peers and the robot, instances of anthropomorphism suggested potential for emotional confusion.

Conclusion

This study contributes new UK-based evidence demonstrating how AI social robots could enrich early years learning through inclusive and playful interactions. The findings showed that Moxie supported confidence, communication, and engagement among young children while offering practitioners a novel mediating tool to facilitate other areas of learning and development.

Further research could explore diverse pedagogical roles for social robots, such as co-thinkers in creativity, tools for teaching AI literacy, and personalised tutors that support inclusion and differentiation. Future studies should include broader age ranges and settings to examine developmental impacts over time. Technological improvements, especially in speech recognition and conversational flow, are required to help robots respond to young children's voices.

The early years sector must continue creating frameworks and standards that uphold child rights, ensure non-discriminatory algorithms, and safeguard against harm. Supported by ethical design and skilled educator facilitation, AI social robots could become valuable tools for collaboration and inclusion in early learning environments.

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Designing for discovery: Montessori-inspired learning materials to foster independence

Introduction

Some elements of the Montessori pedagogy and method are incorporated into Early Years common practice such as the use of manipulable objects that provide children with hands-on experiences to support their learning. However, Montessori learning materials and the way children engage with them are designed to provide opportunities for self-directed activity that leads to a process of self-construction within a physical and social prepared environment that the teacher curates to support the intellectual, physical, emotional and social development of the children in their class (Marshall, 2017). Although the Montessori materials are only an aspect of Montessori classrooms that work in conjunction with other elements and principles of the pedagogy and method, considering some of their characteristics, design criteria and purpose within the dynamics of the learning experience can be beneficial and susceptible of being incorporated in a meaningful way within what schools already do and the learning resources they have available.

Main Points

Montessori materials serve a scaffolding process that allow for natural progression in each curricular area (Practical life, Sensorial, Language and Mathematics for the early years Children's House curriculum). The topic content or task is broken down and organised into smaller aspects to cover a specific purpose leading to a particular learning outcome or skill development. Having self-contained exercises supports the classroom dynamics in which children are independent and active participants of their community and gives them opportunities to engage in activities that demand their minds and body to work simultaneously. This progressively increases their capacity to concentrate, improves their abilities at their own pace and influences their character development.

The sequential layout of the materials throughout the classroom areas, their use following a logical repetitive pattern that the teacher models and the child replicates, the existence of just one of each exercise and their mostly individual use also respond to early childhood sensitive periods in development, in particular the sensitive period for movement, for the social aspects of life and for order which in turn, promote an approach to human development that aligns with what Perry calls a developmentally sensitive and biologically respectful model of education (Phillips, 2022).

Some of the external characteristics of Montessori materials are:

Appealing – aesthetically pleasing, natural materials, ready for independent use

Accessible – at reach, color coded, sequenced, linked to the life in the classroom

One purpose – isolation of the difficulty or tasks involved to then be used in conjunction, support activity cycle (take → use → put back as found)

Self-correcting – mechanical (within the material), increased perception and mastering.

The activities comprised in each Montessori material or exercise can be adjusted to better suit the children's interests and needs as well as the progress in their abilities or ameliorate existing barriers. It is

important to use real objects adapted to the child's size that are relevant to the life in the classroom, for example the use of kitchen utensils for food preparation that they can do themselves.
Teachers observe the child to know what and when to offer certain material. A child needs to be ready both physically and emotionally to engage positively in a learning process. The teacher provides suitable choices that create opportunities for the child to engage in spontaneous activity that responds to their needs and interests and starts or continues the process of 'normalisation', which refers to follow the natural path of human development.
Once a child has been presented – shown how to use – a material, he uses it independently and in this way acquires more autonomy. The three rules in a Montessori classroom are: respect everybody's work, the materials and ourselves and others. It is the adults who hold a safe space that protects the child's concentration whilst using the materials throughout the work cycle and sets a positive classroom climate that fosters a harmonious social interaction.
Each curricular area in the Montessori early years classroom has a set of learning materials. The materials outside these sets are referred to as supplementary materials. Observing the principles involved in the design of Montessori learning materials can help create learning resources that replicate some of their benefits.
Principles for designing Montessori learning materials
Grounded in systems thinking. It has 1) elements, 2) interconnection and 3) a function or purpose.
Gestalt approach to subject area – based on sufficient knowledge and overall cohesiveness.
Split knowledge into single concepts that interlink – each material builds upon the last gradually expanding knowledge and understanding.
Iterative design process with key stages that include: discovery > definition > Ideation > prototyping > Testing > Evaluation – strong emphasis on observation of the use of materials by children to develop didactic materials. (Blackwell, 2024)

Conclusion

Understanding how Montessori materials work in the context of a Montessori classroom and some aspects considered in their design can provide guidance as to how to adjust other learning resources and environments in order to foster independence and incorporate certain aspects of the Montessori pedagogy that can be beneficial to children in other early learning settings.
Using observation as a tool to identify developmental needs and how can the resources available be used to create exercises that respond adequately to them can lead to organising the learning environment in such a way that the activities themselves promote a natural progression in skills. It is the children who will guide this process by responding to the adults preparation of the environment.

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The Harmony Within Collective: Educators Transforming *Inner Dialogue Through the Power of the Arts*

Introduction

The Harmony Within Collective, a collaboration between three powerful teaching organizations, presents *Harmony Hare and Her Three Voices* by Tammy Vallieres as a transformative 3-part workshop. Each organization contributes a unique lens to experiential learning focused on self-talk and emotional regulation through the story of Harmony Hare.

Together, The Harmony Within Collective guides participants through an embodied journey of inner awareness using:

🐰 Storytelling
🎶 Expressive music-making
🧘‍♀️ Creative movement
🌈 Sensory design
💖 Soul-led spaces and trauma-informed tools

Key Points

This immersive experience supports emotional literacy, identity development, and wellness by introducing the three voices within: the Victim, the Villain, and the Hero. Each participant will deepen their understanding of their own inner dialogue (Head) and how it impacts their emotional state (Heart), their actions (Hands) and therefore, their results.

Thoughts + Feelings + Actions = Results/outcomes (based on T. Harv Eker)

Multi-decade practice-based evidence in our own classrooms seeing children transform through our individual specialties as well as leading professional development. Informed through the work of researchers and clinicians such as Waldorf Education, the Reggio Emilia Approach, Maria Montessori, Rudolph Laban, Susan Magsamen and Ivy Ross Dr. Mary Helen Immordino-Yang, Antonio Damasio, Sir Ken Robinson, Dr. Eric Jensen, Dr. Semir Zeki, Lev Vygotsky, Brené Brown, Daniel Goleman, Howard Gardner's Multiple Intelligences, Bloom's Taxonomy and Maslow's Hierarchy.

The Collective: like-minded collaborators
Elizabeth Petersen: https://theinspiredclassroom.com/
Peggy Stern: superdville.com
Polina Lulu: designingforchildrensrights.org
Our practicing is inspired by:
Susan Riley; Institute for Arts Integration and STEAM: artsintegration.com; *Creativity's Edge* (publishing 2/9/26)
Dr. Adrianna Rugiero: Children's Tech and Media Researcher; https://sagomini.com/
Dr. Sherry Kerr: Center for Research on Creativity http://www.croc-lab.org/our_team.html
Hannah Beach and Tamara Neufeld Strijack: https://hannahbeach.ca/ (*Reclaiming Our Students)*
Dr. Eric Jensen: https://www.jensenlearning.com/
Dr. Susan Magsamen: https://www.neuroartsresourcecenter.com/; "Your Brain on Art: How the Arts Transform Us"

Conclusion

Participants will experience the arts as a catalyst for growth, exploring how creativity awakens empathy, resilience, and the "Hero within." They will engage in interactive, arts-based activities that illustrate the connection between emotional well-being and personal transformation.
They will practice reframing self-talk by shifting from limiting inner narratives to empowering language that builds confidence and resilience.
Finally, participants will discover practical tools to nurture open communication and inclusion, leaving them equipped to support both their own growth and the empowerment of others—joining a wider movement of educators, researchers and visionaries committed to shaping positive societal change through the arts.

Next steps

The Educational Collaborative for International Schools October 23-25, 2025 Vienna (Margaret: "Brave Journeys: Building Empathy, Resilience and Voice Through Story")
International Children's Day November 20, 2025
International Make Music Day: Winter Solstice December 21, 2025
Chapter in "The Art of Connection" winter 2025 edition
Brigham Young University Arts Express June 9-10, 2026 Utah
International Make Music Day: Summer Solstice June 21, 2026
Institute for Arts Integration and STEAM: *Creativity Connected* July 7-10, 2026 St. Louis
Rotary International Peace Education–translating Harmony Hare into every language of every country that has a Rotary club, 2025-2026
Create a HundrED "The Harmony Within Collective" page based on the Hyperscore HundrED Spotlight
Neuroarts Resource Center–connected 9/25; looking for opportunities to work together or network on arts integration projects
Voices of Children Pedagogy–joined 10/6/25; "share, update and expand the pedagogy with real-world case studies"
International Forum of Inclusion Practitioners (IFIP) in collaboration with Help Others Pursue Education (HOPE) in Kazakhstan; World Inclusion Congress 2026 March 2026

Actionable strategies

The Collective: forming an alliance of researchers, educators, authors, practitioners, parents, caregivers, all students, including neurodivergent learners, families, coaches and all who are dedicated to fostering peacebuilding, creative expressions and Social and Emotional Learning in children and adults through the arts.

Rotary International: this organization is sponsoring the translation of "Harmony Hare and Her Three Voices" into any language in a country that has a Rotary International presence. Using their own language, leaders share the idea of how to become your own Hero, be it with children or adults.

Workshop and conference presentations: Apply our strategies in classrooms, community centers, daycares, homeschool co-ops, libraries, workshops, conferences, and other settings, refining them through practice. Explore and identify the cultural adaptations needed for each community.

Anecdotal data: document the work we do and its implications for further strategy development using pre-, mid- and/or post-surveys, as well as testimonials.

Research tools and strategies: pursuing the acquisition of data that will enhance our understanding of the results of our work and allow us to share data with others.

Documentation: tracking the evolution of our work through videos, pictures, blogs, articles and social media.

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Making Inclusion Work: Thriving Classrooms for Every Child

Introduction

BLOSSOM Education is a practical framework designed to empower teaching staff in mainstream classrooms to plan, resource, and deliver individualized provision for children with higher levels of need whilst maintaining high quality teaching to every learner in their room.

Main Points

Rooted in the principles of inclusion and neurodiversity celebration, BLOSSOM Education supports educators in creating adaptable, responsive learning environments that meet every learner where they are.

This presentation introduces the three core principles of the BLOSSOM Education approach—Schedules, Learning Library, and Scheduled Tasks—and explores how these elements can be effectively integrated into daily classroom practice. Participants will gain insight into structuring lessons and routines that promote predictability, engagement, and independence for all students, particularly those requiring differentiated or alternative provision.

Attendees will also have the opportunity to reflect and collaborate with fellow professionals, sharing strategies to strengthen inclusive practice and promote positive wellbeing for both teachers and learners.

Conclusion

By the end of the session, participants will be equipped to begin their BLOSSOM Education journey, adopting a flexible and adaptable classroom model that prioritizes wellbeing, inclusion, and the success of every child—ensuring that all learners receive the best possible

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Invitation to Play

Introduction

Early childhood learning relies on play for cognitive, social, emotional, and physical development. In this vast educational terrain, "Invitation to Play" (ItP) has evolved as a purposeful and reflective teaching technique that blends child-led exploration and educator-guided learning. Daly and Beloglovsky (2015) define ItP as the intentional organisation of objects, locations, and provocations to foster self-directed engagement, encouraging curiosity, creativity, and collaboration. This approach combines constructivist and sociocultural ideas, particularly Vygotsky (1978) and Reggio Emilia (Edwards, Gandini, & Forman, 2012), with the educator as a facilitator and the environment as the "third teacher." In kidline with evidence-based frameworks like the Early Years Foundation Stage (EYFS), which promotes active learning, critical thinking, and participation, ItP is relevant in early years practise. ItP offers a counterpoint to accountability and assessment in education by honouring children's agency while achieving deliberate learning results. This lecture covers Invitation to Play theory and practice, design and implementation methodologies, and its integration across developmental and curricular domains.

Main Points:

1. Understanding Invitation to Play

An Invitation to Play is attractive and educational. It entails providing open-ended materials or environments for inquiry and exploration without preset results. ItP is structured to promote developmental goals while preserving self-directed discovery, unlike free play. The instructor considers layout, accessibility, sensory appeal, and children's interests and experiences when planning. This makes learning visible, meaningful, and fun.

2. Designing an Effective Invitation

Flexibility, accessibility, aesthetics, and purpose underpin good design. Environments should be adaptive, attractive, and arranged to support autonomy. Loose pieces allow infinite manipulation, representation, and innovative problem-solving (Daly & Beloglovsky, 2015). Reggio Emilia promotes beauty and order because a well-designed place shows respect for children's learning (Strong-Wilson & Ellis, 2007).

The teacher anticipates learning paths but avoids over-direction while designing ItP. Mirrors, natural objects, textiles, and story suggestions should excite curiosity while allowing children to develop meaning freely.

3. Pedagogical Strategies and the Teacher's Role

Beyond preparation, ItP educators observe, scaffold, and respond. Effective teaching involves participation and intention (Siraj-Blatchford, 2009). Strategies include:

Balance intentional and child-led play: Child-led play encourages inventiveness and autonomy, while intentional play supports curriculum goals like counting blocks for numeracy. Balanced approaches boost skill development and intrinsic motivation.

Educators scaffold thinking through open-ended questions ("What else could you use?") or modeling

without controlling the play narrative.
Balancing provocation and intervention: Provocations encourage inquiry; interventions provide advice, safety, or cognitive support.
As at Reggio Emilia, space is a learning partner. Self-regulation and choice are promoted by well-designed zones—construction, role-play, sensory exploration.
Indoor play promotes fine motor and imaginative skills, while outdoor play promotes risk-taking, gross motor development, and nature connection (Fjørtoft, 2001; Little & Wyver, 2008).
These methods make classrooms vibrant hubs of research and cooperation.
4. Linking Invitations to Learning Areas
Intertwining play with curriculum enriches learning through play-based inquiry:
Communication and Language: Story baskets, puppets, and tale stones improve narrative competency by encouraging storytelling, vocabulary growth, and expressive dialogue.
Threading, climbing, and outdoor building improve fine and gross motor coordination, boosting neurological and kinesthetic maturation.
Cooperative play arrangements like role-play kitchens or building projects promote empathy, turn-taking, and conflict resolution (Johnson & Johnson, 2009).
Literacy: Mark-making stations, alphabet hunts, and pretend “post offices” encourage symbolic thinking and writing (Roskos & Neuman, 2011).
Mathematics: Sorting, measuring, and pretend purchasing practice counting, classification, and reasoning.
Understanding the World: Nature trays, weather stations, and ice excavation encourage observation, inquiry, and science.
Expressive Arts and Design: Process over result, loose pieces and fleeting art experiences inspire creativity and innovation.
These integrated techniques show how play invites naturally promote holistic, cross-disciplinary learning, according to Hirsh-Pasek et al. (2009) and Wood (2013).
5. Theoretical and Research Foundations
Invitation to Play uses constructivist and sociocultural theories to recognise that people and materials co-construct knowledge. Vygotsky's (1978) Zone of Proximal Development underpins ItP's scaffolding, while Reggio Emilia's “hundred languages of children” (Edwards et al., 2012) highlights children's many ways of knowing.
Teachers document, interpret, and respond to learning through observation and discourse using formative assessment (Black & Wiliam, 1998). Differentiation is inclusive, allowing varied learners to meaningfully respond to the same invitation (Tomlinson, 2017). This evidence shows that ItP fosters persistent engagement, creativity, and conceptual understanding.

Conclusion:
Invitation to Play teaches with intentionality, respect for children's agency, and reflection. By creating meaningful, open-ended environments, educators encourage inquiry, cooperation, and lifelong learning. The method integrates assessment, curriculum, and child-centered teaching, blurring the lines between

play and instruction.
Actionable strategies for practitioners include:
Use organic, open-ended elements to curate spaces.
Balance freedom with modest guidance by observing and scaffolding.
Integrate invitations with curriculum goals via inquiry-based design.
Reflect and record learning for continued development.
Promote play as a right, pedagogy, and research-based lifelong learning.
Expanding empirical research on ItP's effects on specific developmental areas and applying it to cultural and international early years contexts may be future priorities.
Invitation to Play concludes that intentionally inviting children into play fosters discovery, curiosity, and learning.

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Integrated Pediatric Curricula in Medical Education: Developing, Implementing, and Evaluating Longitudinal Threads to Effectively Train Future Physicians

Introduction

The health paths of children in early life are significantly influenced by growth and development, nutrition, and social determinants of health. Equipping future health providers to tackle these multifaceted influences requires curricula that go above discrete educational units and embrace integrative, longitudinal methodologies. In 2019, the Geisel School of Medicine at Dartmouth implemented a series of Curricular Threads to integrate fundamental domains throughout all stages of undergraduate medical education. In the context of this structural innovation, Childhood Development, Health, and Illness (CDHI), Nutrition (NUTR), and Health Equity (HE) are three threads which can be used to establish a unified framework for teaching future physicians to address the complex needs of children aged 0–8 in both clinical and community settings.

Main Points

Curricular Frameworks

Curricular Threads represent a purposeful educational framework that integrates interdisciplinary information throughout pre-clinical and clinical training. Each thread maps to specific learning objectives aligned with clinical skills and competencies, thus providing coherence, reinforcement, and thorough assessment across the four-year curriculum.

Three Content Domains

The CDHI Thread highlights normative growth, acknowledgment of pediatric-specific disease manifestations, and preventative health methodologies.

The NUTR Thread focuses on nutritional science, malnutrition, obesity, and food insecurity, emphasizing their impact on overall health throughout a person's lifetime.

The HE Thread examines the effects of structural disparities, such as racism, socioeconomic marginalization, and systemic impediments on child health and healthcare access.

Case-based Educational Methodology

Workshop participants will analyze a clinical case study of a four-year-old child in the daycare setting who is exhibiting cognitive and behavioral delays, subsequently linked to iron deficiency and household food insecurity. This clinical case highlights the convergence of biological, dietary, and social factors on health, demonstrating how unresolved pediatric issues can extend into adolescence, exacerbating hazards.

Curriculum Mapping Exercise

Breakout groups will conduct an interactive curriculum mapping activity to synthesize the case across the CDHI, NUTR, and HE threads. Participants will adopt various roles, including healthcare provider, educator, parent, and public health professional, to identify collaborative strategies for early intervention, nutrition literacy, and equity-centered clinical and community initiatives. This activity will clearly demonstrate how childhood developmental delays, including those associated with autism spectrum disorders and other special educational needs (SEND), intersect with nutrition and health equity, emphasizing the necessity of preparing future physicians to identify and manage these complex pediatric cases.

Educational Insights

National and international guidelines offer essential frameworks for curriculum development.

Interdisciplinary integration is crucial for cultivating clinicians who are skilled in managing multi-factorial pediatric issues.

Assessment functions as the primary driver for ongoing student involvement and learning.

Explicitly acknowledging structural inequities is essential for promoting preventative and community-focused child health.

Conclusion

Systematically integrating pediatric-oriented Curricular Threads into medical education establishes a strong foundation for preparing future physicians to tackle developmental, nutritional, and equity-related health issues. This collaborative educational approach illustrates how an innovative curriculum might assess competencies in both clinical and population health settings. This program will provide participants with versatile tools, curriculum-mapping frameworks, case-based pedagogy, and interdisciplinary strategies that can be applied worldwide to enhance new physician skills and improve early childhood health outcomes.

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Storytime Meets STEM: Introducing AI Concepts in Early Childhood

Introduction

Storytelling has always been at the heart of early childhood education, it is a bridge between imagination and learning. In the age of Artificial Intelligence (AI), stories hold new power: they can be used not only to build language and empathy but also to introduce the fundamental ways machines think and learn. This presentation explores how educators and parents can use children’s books as creative entry points to teach early computational thinking and foundational AI concepts in playful and age-appropriate ways.

The Rationale

For decades, storytime has nurtured imagination, language and emotional growth — all essential to human development. In today’s classrooms, early STEM and AI education often relies on device or coding kits. While these tools have value, they can overlook the human-centered and imaginative benefits of storytelling. Books offer a screen-free way for children and adults alike to explore, learn, and develop critical thinking — no fancy equipment required.

Main Points

Every good story contains patterns — characters make decisions, actions lead to consequences and problems are solved using clues and logic. These narrative elements mirror the principles behind computational thinking and AI. In this presentation, I introduce the idea of the STEM Storytime Framework — a structured yet playful approach that helps educators transform any storybook into a learning experience that builds foundational AI literacy. The framework is has four key steps:

Choose a Familiar Story – Select a children’s book with a clear narrative structure, relatable characters, and decision points.

Connect to a Computational or AI Concept – Identify a concept naturally embedded in the story, such as pattern recognition, prediction, data learning, bias or ethical decision-making.

Create a Hands-On or Reflective Activity – Add a tangible element (e.g., sorting, sequencing, coding-like play) or a thought exercise where children reason or predict outcomes.

Reflect and Reinforce –Discuss the story and connect the dots with the concept. Reinforce the concept with real life examples.

This model not only supports the development of early computational thinking but also ensures that imagination and creativity remain central.

Mapping Books to Concepts

As part of this work, I have curated a list of children's storybooks — both popular and lesser-known — and mapped them to computational thinking (CT) and AI literacy concepts. This list serves as a practical resource for educators and parents who wish to bring these abstract ideas to life through storytime.
For example:

Storybook	Computational Thinking and AI concept	Example Classroom Connection
The Very Hungry Caterpillar by Eric Carle	Sequencing, pattern recognition Learning from data over time	Children track the caterpillar's eating habits → discuss how AI learns from repeated examples.

These mappings highlight that you don't need to be a programmer to teach computational thinking. With the right lens, even a bedtime story can spark curiosity about how technology learns, makes decisions and impacts people.

Conclusion

Storytime Meets STEM is a call to reimagine early learning — to see storytelling not as separate from technology but as its imaginative foundation. The same curiosity that drives a child to ask, "Why did the character do that?" prepares them to later ask, "Why did the AI make that choice?" By introducing computational thinking and AI concepts through stories, we help children see technology as something they can understand, question, and shape — not just consume.In essence, storytime becomes the child's first STEM classroom, where books connect human imagination with machine intelligence. Our responsibility as educators is to nurture these connections through creativity, compassion, and curiosity — one story at a time

Keywords:
Computational Thinking, AI Education, Storytelling & Play, Early Childhood Education, Screen Free Learning

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Stronger Together: Building family and community partnerships for every child's success.

Background: The philosophy that "it takes a village to raise a school, and a school to raise a child" provides a robust foundation for holistic, learner-centred education. Contemporary research demonstrates that effective teaching and learning are driven by active involvement of families and community networks (Epstein, 2011; Bronfenbrenner, 1979). Such partnerships build trust, mutual respect, and shared responsibility, helping to shape the social, emotional, and academic trajectories of children (Sanders, 2014).

Main Points
This session explores the transformative potential of collaborative action among key school stakeholders. Intentional engagement—through family partnerships, cooperation with community organisations, and intergenerational initiatives—enhances learner outcomes and supports well-rounded growth (Epstein, 2018). Bringing together children and older generations not only supports social development but also provides historical continuity, allowing young learners to see themselves as part of a broader social fabric (Vygotsky, 1978; Crosnoe, 2009).
The session employs a blend of interactive visuals, hand-out materials and reflective activities to scaffold participants' shared learnings. An embedded hands-on activity models practical community engagement, including art, music, and facilitated dialogue designed to mirror diverse real-world learning experiences (Epstein, 2018; Rogoff, 2003). These adaptable resources will help educators embed collaborative principles into their daily practice (Sanders & Epstein, 1998).
Participants will gain access to research-backed strategies for strengthening community partnerships that address local learner needs (Sanders, 2014). The provided toolkit and guided reflection will enable practical implementation, supporting holistic social, emotional, and academic growth through joined-up approaches. The session champions culturally responsive and inclusive practice, building collective capacity for child-centred development (Bronfenbrenner, 1979; Epstein, 2011).

Conclusion
Through modelling authentic collaboration, providing actionable resources, and implementing hands-on engagement, the session empowers educators and school leaders to forge lasting partnerships in pursuit of comprehensive learner success (Crosnoe, 2009; Epstein, 2018). This approach supports sustainable strategies for strengthening school-community bonds, positioning all learners to thrive within resilient, collaborative ecosystems.

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The System of Justness: Rethinking a Conventional Approach to Behavior

Introduction:
One of Dr. Montessori's revolutionary insights about children is the power of work to construct the personality. So what can we do to ensure that all children, including those presenting challenging behaviors, have equitable access to work opportunities and to show up as their whole self? How do we as adults engage in full preparation, build strong relationships with all of our children, and understand how to reconnect them to work? The Montessori System of Justness provides a framework to support schools in replacing a more traditional "discipline/behavior policy" with a plan that builds problem solvers and leaders of tomorrow.

Main Points:
The System of Justness is a comprehensive framework for proactive and responsive support for the whole school through fidelity to the Montessori method, respectful relationships with children, and equitable support for children who need it most. The System of Justness gives a new structure to schools' approach to serving all children. It includes: Montessori Implementation, The Nautilus Approach and Montessori Early Intervention.
Montessori Implementation
The full implementation of the Montessori approach is foundational to the System of Justness. It requires that all the adults in the school carry a growing understanding of the Montessori philosophy and act from it throughout the school day.
The Nautilus Approach
The Nautilus Approach lies at the center of the framework offering support for the whole school through step-by-step guidance for reconnection through set phases during which the goal is to support the child in returning to their work. The Nautilus Approach replaces the traditional "discipline/behavior policy" that schools often use in line with their school district or for lack of better alternatives.
Montessori Early Intervention
Montessori Early Intervention is an approach for offering early, Montessori-oriented support for children and families. It supports children who arrive at school unsure of how to engage in learning environments or who over time struggle to move forward in their learning either academically, behaviorally, socially, or emotionally. This is a Montessori version of the Multi-Tiered System of Support (MTSS) or Response to Intervention (RTI) and it allows teams to develop Action Plans aligned with the Montessori method that support children thriving in the classroom.
Learning Objectives
1. Ability to differentiate between Behaviorist and Constructivist approaches
2. Familiarity with the System of Justness as an alternative to mainstream approaches to discipline
3. Assessment of learners own school environment as it relates to the System of Justness

Conclusion:

This workshop will introduce participants to the components of the System of Justness and offer ways to get started with this approach that is in line with the Montessori method. At the heart of the System of Justness is the desire to reach all children and to reduce the over-referral of any specific demographic out of the classroom for disciplinary action. As Montessori said in the International Congress of 1937: "Do we believe and constantly insist that cooperation among the peoples of the world is necessary in order to bring about peace? If so, what is needed first of all is collaboration with children.... All our efforts will come to nothing until we remedy the great injustice done the child, and remedy it by cooperating with [them]. If we are among the [people] of good will who yearn for peace, we must lay the foundation for peace ourselves, by working for the social world of the child."

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Getting It Done Right: Four Leadership Tools to Increase Staff Retention, Collaboration, and Satisfaction

Introduction: This presentation explores the vital impact of skilled leadership on staff retention, collaboration, and overall satisfaction. A 2015 Gallup study found that 75% of employees had left their jobs due to their managers but with an increased focus on leadership development, the rate has dropped to 60%. Recognizing the importance of developing leaders that will impact the next generation **of programming,**

Main Points: Drawing from our nationwide work in early care and education leadership, we identified four essential tools that consistently drive success: program design, vision casting, reflective communication, and staff engagement. We will delve into targeted strategies within each of these areas to strengthen program culture, boost effectiveness, and enhance staff fulfillment.

Conclusion: Our goal is to offer valuable insights for early care and education stakeholders, inspiring innovative leadership development in programs that support children and families.

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Will Bohlen, February 25, 2024, NAEYC Survey Shows Child Care Crisis Worsening After Federal Funding Expired, NAEYC, https://www.naeyc.org/ece-workforce-surveys

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The role of the inquiry educator in play

Introduction

In many early years contexts around the world, play is under threat. Play and learning are often seen as opposites, with increasing pressure to focus on more formal learning. However, substantial evidence supports the idea that play can enhance the learning of knowledge, skills, and understanding. A key factor in this process is the educator, the environment they create, and the relationships they build. Within the International Baccalaureate's (IB) Primary Years Programme (PYP) play is recognized as the primary driver for inquiry and reflects the holistic and authentic way in which children explore, grow and learn. (IBO 2018) Inquiry in the PYP can be child initiated through play and educator facilitated through observation, documentation and reflection.

Main Points

The role of the inquiry educator in play is complex. The actions of children during play can be observed and documented. Children test theories, wonder, take on challenges, communicate, use prior knowledge, and more. Looking through the lens of play as inquiry, the inquiry educator can take these observations and through a process of reflection, individually or in collaboration with others, use them to enhance or support learning.

When undertaking observations of children in play, educators should plan carefully for what will happen pre, during and post observation.

Pre-observation:
What is the purpose of the observation?
How will evidence be collected?
Who is this for?

During the observation:
Where will I be positioned?
Is it appropriate to ask questions or not?

Post observation:
How will the observations be shared?
Who will the observations be shared with?
How could this support learners?
Based on what was observed, what response could be made?

Once an action is identified, (e.g. addition of new materials, modelling of a skill, giving more time for exploration) the impact of the action should be evaluated to see if it is a good fit, in which case the result should be continued independent play, or a poor fit. (Trawick-Smith & Dziurgot, 2010). If the action results in a poor fit, the observation process can be used to gather additional information to help inform future actions.

Conclusion

When educators observe children's play with curiosity, they gain bigger picture of the child, looking beyond what they are doing, to uncover their wonderings, the theories they are exploring, the skills they are using, the skills they are developing, their strengths and challenges, they are looking at the learning process in all its richness. All this information can provide a rich source of information about the learner and can be used to plan next steps in learning.

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Seeing the World through Their Senses: Supporting Young Children's Sensory Needs

Introduction

In early childhood, sensory processing lays the foundation for all learning and development. Every child experiences the world through their senses—sight, sound, touch, taste, smell, movement, and body awareness. However, children with sensory processing difficulties (SPD) experience and interpret sensory information differently, which can significantly impact their ability to focus, regulate emotions, and engage in classroom activities. This presentation explores how educators can identify and support children's sensory needs in early years settings through intentional, inclusive, and responsive practice.

Main Points

1. Understanding the Sensory Systems

While most educators are familiar with the five traditional senses, this presentation highlights the eight interconnected sensory systems—vision, hearing, touch, taste, smell, proprioception, vestibular, and interoception. Each system plays a vital role in how children process information, manage emotions, and interact with their environment.

2. Recognizing Sensory Processing Difficulties

Children may exhibit hypersensitivity (over-responsiveness), hyposensitivity (under-responsiveness), or sensory-seeking behaviors. For example, a child who is hypersensitive to sound may cover their ears during group time, while a hyposensitive child may crave movement and touch. Identifying these signs allows teachers to respond with empathy rather than labeling behaviors as 'challenging.'

3. Classroom Impact and Practical Strategies

Educators often encounter challenges in creating sensory-inclusive environments. This session provides practical classroom strategies for each sense—ranging from minimizing visual clutter and providing quiet zones to incorporating movement breaks, sensory diets, and tactile play. Teachers will explore adaptive tools such as noise-cancelling headphones, wobble cushions, fidget toys, and weighted resources that help children self-regulate.

4. Sensory Regulation and the 'Just Right' State

Drawing from Jean Ayres' concept of sensory integration, the presentation explains how achieving the "just right" state of arousal enables children to participate meaningfully in learning. Visual models such as 'sensory cups' help practitioners understand how to balance input and identify when children are overstimulated or under-stimulated.

5. Collaborative and Reflective Practice

Supporting sensory needs is most effective through a collaborative approach involving educators, SENCOs, occupational therapists, and parents. Observation, documentation, and open communication form the basis of responsive planning. A sensory-friendly classroom benefits all children—not only those with identified needs—by promoting calmness, focus, and engagement.

Conclusion

Understanding sensory processing is key to fostering inclusion and emotional wellbeing in early years education. By observing, adapting, and responding to children's sensory needs, practitioners can create environments that nurture every learner's potential. This presentation encourages educators to view sensory behavior as communication and to adopt proactive, child-centered strategies that enhance both teaching practice and children's quality of life.

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The effectiveness of a strengths-based early intervention 'First Steps' programme with young autistic children

Introduction

This paper presents key findings of the evaluation of the 'First Steps – An early autism support programme' for young children (up to the age of 4 years) and their parents/primary caregivers (Papatheodorou and Prescott, 2021). First Steps is informed by the latest scientific evidence, and it is based on knowledge co-construction, involving paediatric occupational therapists, child psychotherapists, autism experts and parents of autistic children to ensure that its implementation is based on the realities of families and professional practice (Papatheodorou and Prescott, 2025).

Autism, referred to as Autism Spectrum Disorder (APA, 2013), is understood as a complex neurological and brain development condition, caused by complex genetic, environmental and epigenetic factors (Das et al., 2020), characterised by excessive neural connections/synapses, and/or disruptive synchronisation between the two hemispheres (Courchesne et al., 2007; Dinstein et al., 2011). Autism is a lifelong condition, but its developmental trajectory can be altered if signs of autism are detected early in life and appropriate support is provided (Alonim et al., 2021)

The programme is premised on scientific evidence showing (i) the reciprocity between sensory sensitivity/motor coordination and emotional and affective expression, and social interaction (Trevarthen and Delafield-Butt, 2013; 2020), better understood as a subtle unconscious process and response to environmental stimuli and interactions with others (Porges, 2018); and (ii) the role of early experiences in shaping the developmental trajectory of young children and especially the brain synaptic development and pruning, during the first four years of life.

The interplay between sensorimotor and affective experiences is particularly significant during infancy and toddlerhood, when children's experiences are largely sensory and non-verbal, while early experiences such as shared reciprocal interactions between parents/primary caregivers and their child through playful and expressive (non-verbal and verbal) communication provide the appropriate context for shaping the brain architecture and determine the developmental trajectory of young autistic children (Papatheodorou and Prescott, 2025). Thus, First Steps implementation takes a strengths-based, and playful relational approach. It is implemented by trained paediatric occupational therapists and child psychotherapists in the family home. First Steps is aimed at both the child and primarily parents/primary caregivers, intending to identify and acknowledge their strengths and build upon them to enhance their capacities and strengths (Papatheodorou and Prescott, 2025).

Methodology

For the evaluation of First Steps, a multiple case study methodology was followed (Yin, 2017), involving analysis of documentary evidence, and interviews with parents and therapists, who were involved in the programme implementation. Documentary evidence included various child and family assessments, and semi structured interviews were conducted with parents and therapists. A sequential approach was followed to data gathering and analysis (Cresswell and Plano Clark, 2007). Documentary analysis was conducted first, following an inductive thematic analysis, while interviews with parents and therapists followed a hybrid thematic analysis (Proudfoot, 2022). The evaluation objectives were:

Identify and assess the progress made in the child and parent outcomes, related to programme goals

Identify elements of the programme influencing goal progress, including restrictive or inhibiting elements.

Key findings

The documentary analysis revealed that the therapists assessed several areas, considering strengths and challenges for goal setting for both the child and parents/primary caregivers. For the child, assessments areas included:

Motor coordination and sensory sensitivity

Affective, emotional expression and behaviour

Communication and language

Social interactions

Play interactions and engagement

Transitions outside the home

For parents areas assessed included.

Relationships and interactions with the child

Play and engagement with the child

Parents' personal and family experiences and challenges

Parent and therapist relationship and interactions

Support availability

Analysis of interviews showed that for children, measurable progress was observed in communication, regulation, and play -manifested through new words or signs, greater participation in imaginative activities, and improved adaptability during transitions.

"Definitely more communication, more words, more speech. And I think that's because of understanding him - understanding how his brain works."

For therapists, the dual-lens model fostered professional growth as occupational and clinical practitioners learned from one another and from the families they supported.

The therapists' professional practices reflected five interrelated themes. *Play-based, child-focused support* positioned play as the primary medium for connection, communication, and emotional growth. *Sensory-motor regulation* approaches, stabilising children's bodies and nervous systems to enable engagement and learning. Through *in-the-moment parent coaching*, therapists modelled responses and narrated their reasoning during sessions, equipping parents with practical tools and confidence to support their children at home. A *strengths-based framing* of behaviours helped reframe challenges,

fostering parental hope and resilience. Finally, *systemic integration* extended support into early years settings, ensuring continuity across home, nursery/school.

Recommendations for strengthening and enhancing the programme implementation were: therapists' consistent use of the *First Steps* recommended assessment and review documents to ensure that child and family strengths and needs are comprehensively identified and tracked; enhancing the therapists' interprofessional collaboration for setting measurable goals and micro-goals, linking them directly to daily routines, enabling families to observe and celebrate incremental progress; improving systems of reporting and feedback to parent/primary caregivers to promote shared understanding, sustain engagement and reinforce transparency of programme implementation; and the introduction of a monitoring and evaluation system to measure progress and programme effectiveness; ,

Conclusion

The *First Steps* programme has demonstrated itself to be a powerful model for family support, blending the practical expertise of paediatric occupational child psychotherapists. Families consistently described the programme as life-changing, highlighting transformational gains in children's communication, regulation, play, and independence, alongside increased parental confidence, understanding, and hope. Parents and therapists valued the professional growth and holistic outcomes made possible through the dual-lens approach, which also generated wider impact across nurseries and early education settings. Consistent documentation, clearer goal setting, regular feedback to parents, and the introduction of a monitoring and evaluation system were recommended as ways of strengthening further the programme's relational ethos and collaborative practice.

Declarations

Funding for the evaluation of First Steps was received by Open University, Societal Challenge

The evaluation of First Steps was undertaken by Lucie Wheeler (RECAP Ltd) and it was supported by Dr Claudi Thomas and Dr. Collette Christiansen (Open University), all independent to the programme development and implementation.

Carla O'Sullivan, Fizza Hasan and Eloise Crowson (Transforming Autism), undertook tasks as requested by the researchers

Dr Theodora Papatheodorou, First Steps programme lead developer and author, and advisor to programme evaluation in this capacity.

Tracy Pepper, Transforming Autism CEO had the oversight of the programme evaluation

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Child-Led, Culture-Rich: New pathways in Montessori Education through a Cultural Lens

This paper explores how collaborative action research and the concept of funds of knowledge (Moll et al., 1998) can serve as transformative tools in adapting Montessori practice to diverse cultural contexts. Montessori herself asserted that she "did not wish to originate a method of education, nor am I the author of a method of education. This is not a method of education like other methods, but it is the beginning of something which must grow… allied to human beings who develop in freedom. It is a history of liberty and not the recital of any individual's thoughts" (Montessori, 1912/2013, p.10). This statement underpins the argument that Montessori envisioned an educational philosophy capable of evolving within and through all communities and cultures.

Montessori education is founded on a dynamic triangle comprising three interdependent elements: the child, the teacher, and the environment. This study presents findings from a longitudinal collaborative action research project conducted in a rural community school in Malawi. The research aimed to critically examine how the Montessori approach could be reconsidered to support cultural collaboration and learning within a Malawian context. Central to this inquiry was the community's role in shaping a culturally relevant Montessori pedagogy through the interplay of adult, child, and environment.

The study critically analysed the application of the dynamic triangle in relation to culturally specific principles (Montessori, 1912/2013), and engaged with the fidelity of Montessori pedagogy as a pioneering educational model (Lillard, 2012). The foundational principles of the approach were challenged and enriched by the voices of a marginalised community. Echoing Montessori's early work in San Lorenzo, the environmental conditions of the rural Malawian early childhood centre provided a unique cultural context "devoid of obstacles to the expansion of the child's personality" (Trabalzini, 2011, p.177), enabling the emergence of a locally grounded and responsive educational practice.

A collaborative action research framework, structured around three action phases and three reflective phases, was developed to foster inclusive engagement and amplify the voices of the local community and culture. This framework respected and integrated *funds of knowledge* (Moll et al., 1998) through the implementation of Montessori pedagogy, facilitating a culturally responsive educational approach. The research was grounded in a critical and respectful understanding of both the historical trajectory of Early Childhood Education and Care (ECEC) in Malawi (Wong, 2013) and Montessori's pioneering educational philosophy, enabling the development of equitable and transferable knowledge (Moll et al., 1998).

The methodology was designed to create opportunities for participants to share indigenous values and perspectives, thereby enabling meaningful critical reflection. Collaborative engagement throughout the research process helped avoid perpetuating colonial narratives and instead supported the democratization of knowledge (Wood, McAteer & Whitehead, 2018, p. 8). Reflexivity and iterative reflection empowered the identity, voice, and values of the community (Parsons & Harding, 2011), positioning participants as co-constructors in the exploration, development, and refinement of context-specific research methods.

Together, we examined the interconnected roles of the child, the adult, and the environment as collaborative cosmic agents of change (Montessori, 2020). Central to this exploration was the inclusion of co-researchers' voices and their funds of knowledge (Moll et al., 1992), which informed a decolonized approach to teacher training (Osgood, 2020). This process facilitated the development of a culturally responsive learning environment (Ladson-Billings, 1995; Brunold-Conesa, 2020) throughout the three phases of the action research cycle.

The application of Montessori pedagogy enabled the adaptation of the prepared, temporal, and social environment (Lillard & McHugh, 2019a; Lillard & McHugh, 2019b) to align with local practicalities and Malawian cultural values. The research demonstrated the feasibility of sustaining a Montessori environment that promotes social, purposeful, hands-on, and child-led learning experiences. These findings support the evolution of a Montessori pedagogy that is continually refined through observation and practical engagement, while remaining deeply rooted in the foundational principles of Montessori philosophy.

Although Montessori education was developed over a century ago, this research provides compelling evidence that it can be successfully implemented as a sustainable and contextually relevant approach in settings such as Malawi. The effectiveness of this work is rooted in the collaborative and interactive engagement between the trainer, the community, the teachers, and the children. This collective effort redefined Montessori education and teacher training by integrating the foundational principles of a pioneering pedagogy with indigenous knowledge systems.

The project significantly enhanced the knowledge, confidence, and agency of Malawian educators, enabling them to take ownership of improving educational opportunities in ways that are both culturally and contextually responsive (Ladson-Billings, 1995; Ford & Kea, 2009). Through sustained collaboration, the research brought together the pedagogical legacy of Montessori with the lived experiences and funds of knowledge of the local community (Moll et al., 1998), fostering a transformative educational environment.

The freedom to explore, experiment, repeat, and practice within a culturally developed learning space empowered children, teachers, and the wider community to grow from within. This approach enabled learners to make sense of their own first-hand experiences, cultivating a lifelong disposition toward inquiry and meaning-making. In doing so, they claimed ownership of their environment and learning processes, embodying the principles of experiential education (Katz, 2012).

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Children as Co-Creators: Exploring Young Children's Engagement with AI Tools for Book Illustration in an Early Years Classroom

Introduction

This study explores how preschool children, ages 5–6, can meaningfully engage with artificial intelligence (AI) as co-authors of a picture book. In early childhood education, AI is often perceived as abstract or inaccessible; however, positioning it as a creative partner opens opportunities for young learners to explore digital literacies, creativity, and collaboration (Su et al., 2023). In this study, children participated in a classroom-based project over a ten-week period, where they contributed ideas, narrated story scenes, and critically appraised AI-generated outputs. Teachers supported children's involvement by scaffolding prompt creation and ensuring fairness in collaborative decisions.

Main Points

Several key findings emerged:
Active participation and critique: Children not only observed but also evaluated AI outputs, such as noticing flaws such as "This one has only one leg", questioning system behavior, such as "Will it give one ear a ribbon and the other a flower?", and claiming recognition such as "This looks like me".
Development of digital literacies: Through playful interaction, children learned to transform intentions into prompts, manipulate visual interfaces, and negotiate design choices democratically.
Transformation of AI's role: AI shifted from being perceived as a mysterious machine to becoming a visible, fallible, and co-constructive tool within the learning process.

Conclusion

This study demonstrates that early childhood classrooms can use playful co-authoring with AI as a pathway to deepen imagination, collaboration, and multimodal authorship. By embedding AI into story creation processes, educators can foster children's curiosity about technology while supporting democratic participation and creativity. Future directions include scaling similar approaches across different contexts and examining long-term impacts on children's digital literacy development.

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