



**jces.** **Journal of Childhood,  
Education & Society**

**Volume 7 • Issue 1  
February 2026**

ISSN: 2717-638X

# Journal of Childhood, Education & Society

Volume 7 • Issue 1

February 2026

## Editor in Chief

Mehmet Toran, Ph.D., Istanbul Kultur University, Türkiye

## Associate Editors

Adrijana Višnjić Jevtić, Ph.D., University of Zagreb, Croatia

Carmen Huser, Ph.D., Early Childhood Australia, Australia

Eleonora Teszenyi, Ph.D., The Open University, UK

Ibrahim H. Acar, Ph.D., Ozyegin University, Türkiye

Mesut Saçkes, Ph.D., Balikesir University, Türkiye

Mine Gol-Guven, Ph.D., Boğaziçi University, Türkiye

Stamatios Papadakis, Ph.D., The University of Crete, Greece

## Assistant Editors

Fatma Büşra Aksoy-Kumru, Ph.D., Istanbul University-Cerrahpaşa, Türkiye

Jane Dorrian, Ph.D., The Open University, UK

Kerem Avcı, Ph.D., Balikesir University, Türkiye

Taibe Kulaksiz, Ph.D., Heidelberg University of Education, Germany

## Editorial Board

- Ahmet Simsar, Ph.D., Sharjah Education Academy, United Arab Emirates  
Aileen García, Ph.D., University of Missouri, USA  
Alicje Renata Sadownik, Ph.D., Western Norway University of Applied Sciences, Norway  
Anikó Vargáné Nagy, Ph.D., University of Debrecen, Hungary  
Aysel Tufekci, Ph.D., Gazi University, Türkiye  
Betty Liebovich, Ph.D., Goldsmiths University of London, UK  
Burcu Unlutabak, Ph.D., John Hopkins University, USA  
Carolyn Brockmeyer Cates, Ph.D., State University of New York Purchase College, USA  
Ebru Aydın Yüksel, Ph.D., Istanbul Kultur University, Türkiye  
Elif Karsli, Ph.D., University of South Carolina, USA  
Elsa Lucia Escalante Barrios, Ph.D., Universidad del Norte, Colombia  
Ersoy Erdemir, Ph.D., Bogazici University, Türkiye  
Francesca Zanatta, Ph.D., University of East London, UK  
Eva Mikuska, Ph.D., University of Portsmouth, UK  
Gulsah Ozturk, Ph.D., Federation University Australia, Australia  
Hasina Banu Ebrahim, Ph.D., University of South Africa, South Africa  
Heidi Kloos, Ph.D., University of Cincinnati, USA  
Ibrahim Halil Diken, Ph.D., Anadolu University, Türkiye  
Ikbal Tuba Sahin-Sak, Ph.D., Van Yuzuncu Yil University, Türkiye  
Jesús Paz-Albo, Ph.D., King Juan Carlos University, Spain  
Jie Gao, Ph.D., University College London, UK  
Jolyn Blank, Ph.D., University of South Florida, USA  
Kathy Cabe Trundle, Ph.D., Utah State University, USA  
Ken Blaiklock, Ph.D., Unitec Institute of Technology, New Zealand  
Konstantina Rentzou, Ph.D., University of Ioannina, Greece  
Kristin M. Gagnier, Ph.D., Johns Hopkins University, USA  
Kyunghwa Lee, Ph.D., University of Georgia, USA  
Lasse Lipponen, Ph.D., University of Helsinki, Finland  
Maelis Karlsson Lohmander, Ph.D., University of Gothenburg, Sweden  
Maide Orcan, Ph.D., Mugla Sitki Kocman University, Türkiye  
Marcruz Yew Lee Ong, Ph.D., Saint Francis University, Hong Kong  
Martha Allexsaht-Snider, Ph.D., University of Georgia, USA  
Maryam S. Sharifian, Ph.D., James Madison University, USA  
Mehmet Mart, Ph.D., Necmettin Erbakan University, Türkiye  
Michael F. Kelley, Ed.D., Arizona State University, USA  
Mustafa Yasar, Ph.D., Cukurova University, Türkiye  
Noelia Sánchez-Pérez, Ph.D., University of Zaragoza, Spain  
Ozcan Dogan, Ph.D., Hacettepe University, Türkiye  
Paulette A. Luff, Ph.D., Anglia Ruskin University, UK  
Pekka Mertala, Ph.D., University of Jyväskylä, Finland  
Ramazan Sak, Ph.D., Van Yuzuncu Yil University, Türkiye  
Riza Ozdemir, Ph.D., Zonguldak Bulent Ecevit University, Türkiye  
Sabina Savadova, Ph.D., The University of Edinburgh, UK  
Sharolyn Pollard-Durodola, Ph.D., University of Nevada Las Vegas, USA  
Sharon L. Raimondi, Ph.D., University at Buffalo, USA  
Sonnur Isitan, Ph.D., Balikesir University, Türkiye  
Sultan Kilinc, Ph.D., Syracuse University, USA  
Tim Rohrmann, Ph.D., University of Applied Science and Arts Hildesheim, Germany  
Tony Bertram, Ph.D., Centre for Research in Early Childhood, UK  
Yan Zhu, Ph.D., University College London, UK  
Yasin Ozturk, Ph.D., Trabzon University, Türkiye  
Yuwei Xu, Ph.D., University College London, UK  
Zsuzsa Millei, Ph.D., Tampere University, Finland

## Language Editor

Fetiye Erbil, Ph.D., Bogazici University, Türkiye

## Editorial Assistants

Gizem Alvan, Bogazici University, Türkiye

Helena Biškup, University of Zagreb, Croatia

Serbest Ziyanak, Ph.D., Van Yuzuncu Yil University, Türkiye

Publisher: Journal of Childhood, Education and Society

Publishing Manager: Dr. Mehmet Toran

Editorial Office: Istanbul Kültür University, Faculty of Education, Basın Ekspres Campus, 34303 Küçükçekmece/ Istanbul-Türkiye

e-mail: [editor@j-ces.com](mailto:editor@j-ces.com) Phone: +902124984131 Cover Page Picture: Diren Toran (3 years old-2019)

Publication Type: Published triennially, peer-reviewed, open-access academic journal.

WEB: <https://www.j-ces.com/index.php/jces/index>, DOI: <https://doi.org/10.37291/2717638X.202671>

ISSN: 2717-638X

# Journal of Childhood, Education & Society

Volume 7 • Issue 1

February 2026

---

## CONTENTS

---

### RESEARCH ARTICLES

---

Recent early childhood education graduates' career aspirations and perceptions of the profession <i>Katherine Becker, Yalin Gorica &amp; Lisa Phyllis</i> .....	1-14
The discursive constructions of evil and related emotions in Finnish pre-primary education <i>Emma Kurenlahti, Cathryn van Kessel, Saila Poulter, Jaakko Hilppö &amp; Lasse Lipponen</i> .....	15-33
Between a rock and a hard place: Principals' views on gender issues in teacher recruitment in Indonesian early childhood education <i>Muchammad Tholchah &amp; Renti Aprisyah</i> .....	34-51
Parental coaching strategies for child failure resilience: Predictors and child mastery motivation <i>Wen Wang, Ashley M. Fraser, Kelsey Lucca, Fahad Usman, Ying Huang &amp; Camille Elder</i> .....	52-65
The impact of parent-teacher collaboration on kindergarteners' social-emotional learning <i>Jiahui Li &amp; Barbara Elena M. Lagos</i> .....	66-81
'It's just their mind taking a break when it needs to': How parents in Ireland view and manage mind-wandering in young children <i>Olivia Wynne, Maisie Flynn, Agnieszka Graham, Teresa McCormack, Joyce Senior, John McMullen &amp; Michelle Downes</i> .....	82-100
Language outcomes in high-risk Hawaiian children at <i>Ka Pa'alana</i> : A family-child interaction learning program <i>Priscilla Grunauer &amp; Francys Subiaul</i> .....	101-119
Imagining futures: Possible selves and professional identity in an early childhood pre-practicum incident <i>Ignacio Figueroa-Céspedes &amp; Esteban Fica-Pinol</i> .....	120-136
Applying activity theory to examine mobile application mediation of engagement and curriculum tensions in Chinese preschool <i>Yufan Zhang, Nurul Nadwa Zulkifli, Ahmad Fauzi Mohd Ayub &amp; Nur Raihan Che Nawi</i> .....	137-154
Understanding childhood weight bias: Laying the foundation for promoting positive body image <i>Tingting Xu, Yuan He &amp; Sarah Savoy</i> .....	155-170
Sustainable preschools: A model for change <i>Ingrid Pramling Samuelsson, Ingrid Engdahl &amp; Eva Ärlemalm-Hagsér</i> .....	171-188
Assessment in early childhood education: Micro-regimes perspective <i>Maiju Paananen, Eerika Lämsmans, Eija Räikkönen</i> .....	189-206

---

---

Exploring teachers' perspectives on home visit practices in early childhood special education: A qualitative study from Türkiye <i>Ahmet İlkhan Yetkin, Özlem Yağcıoğlu Has &amp; Furkan Akdağ...</i> .....	207-222
---	---------

---

### CONCEPTUAL ARTICLES

---

Nested ecologies of childhood: A microbial turn in developmental theory <i>Zsuzsa Millei, Nick Lee, Sarah Alminde, Asta Breinholt, Mira Grönroos, Riikka Hohti, Sami Keto, Marja Roslund, Spyros Spyrou, Tuure Tammi, Hanne Warming, Juliene Madureira Ferreira...</i> .....	223-235
---	---------

---

# Recent early childhood education graduates' career aspirations and perceptions of the profession

Katherine Becker<sup>1</sup>, Yalin Gorica<sup>2</sup>, Lisa Phyllis<sup>3</sup>

**Abstract:** The aim of this study was to explore the career-related intentions, experiences, and perceptions of ECE graduates to better understand persistent childcare staffing shortages and educator turnover. Recent graduates of an Early Childhood Education diploma program at an Ontario college participated in a small-scale, mixed-method pilot study; 56 completed an online questionnaire and 18 participated in a follow-up individual interview or focus group. Results demonstrated that Early Childhood Education was the first choice of program for most participants, but for varied reasons that were not necessarily associated with the intention of being an early childhood educator as a long-term career. Rather, the educational credential was seen by some as a stepping stone leading to something else, and this intention was present pre-program. Those recent graduates interested in current and future employment in early childhood had already experienced barriers to staying, casting doubt on the efficacy of government strategies to address ECE shortages and retention challenges.

## Article History

Received: 28 January 2025

Accepted: 28 July 2025

## Keywords

Early childhood; Educator perspectives; Educator retention; Mixed methods

## Introduction

Understanding the factors that influence the career trajectory of early childhood educators (ECEs) is important to developing effective strategies to attract and retain new early childhood professionals. The preponderance of literature featuring early childhood educator perspectives about their profession includes ECEs working in the field (Association of Early Childhood Educators Ontario, 2016a; Brown & Englehardt, 2016; McDonald et al., 2018; Powell et al., 2021; Richardson et al., 2023; Stronach, 2023). Such research omits insights from educators who have already left the field, or who successfully completed training but did not enter the field. To a lesser extent, research has also involved the perspectives of preservice ECEs (Osborne et al., 2018; Robinson et al., 2021; Santo et al., 2017), but these participants cannot yet provide perspectives on program completion and post-graduation employment.

This study aimed to explore the career-related intentions, experiences, and perceptions of recent ECE graduates. It adds to the research literature through a focus on recent graduates who graduated from ECE preservice programs within 12 months, a participant sample with insights during a pivotal period when memories are fresh of classroom and field training experiences and career-related decisions, including those related to job searches. An advantage of a participant sample of recent graduates is gaining new understandings from ECEs whose insights may otherwise be missed: trained ECEs who do not enter the field or enter the field only for a short time. Data from such participants can provide a more complete picture for policymakers, postsecondary institutions, and employers about the disparate career aspirations and impressions of the profession from the diverse students who elect to enroll in an Early Childhood Education program.

<sup>1</sup> Sheridan College, Faculty of Applied Health and Community Studies, School of Education, Brampton, Canada, e-mail: [katherine.becker@sheridancollege.ca](mailto:katherine.becker@sheridancollege.ca), ORCID: <https://orcid.org/0009-0007-6155-4428>

<sup>2</sup> Sheridan College, Faculty of Applied Health and Community Studies, School of Education, Brampton, Canada, e-mail: [yalin.gorica@sheridancollege.ca](mailto:yalin.gorica@sheridancollege.ca), ORCID: <https://orcid.org/0009-0006-9248-1842>

<sup>3</sup> Sheridan College, Faculty of Applied Health and Community Studies, School of Education, Brampton, Canada, e-mail: [lisa.phyllis@sheridancollege.ca](mailto:lisa.phyllis@sheridancollege.ca), ORCID: <https://orcid.org/0000-0002-2901-4575>

## Study Background

High-quality early childhood education provides economic advantages for society and long-term health, academic, and economic benefits particularly for disadvantaged young children (Elango et al., 2016). In recognition of the economic and child development benefits of children's regular participation in early learning programs, the Government of Canada has committed over \$30 billion to build a Canada-wide Early Learning and Child Care (CWELCC) system through individual funding agreements with the provinces and territories. Over \$10 billion will be invested to expand accessible, affordable childcare in the most populous province, Ontario. More than half of Ontario's young children live in a childcare desert, meaning that in their postal code, there are more than three children for every licensed childcare space (MacDonald & Friendly, 2023). The government has committed to creating 86,000 new childcare spaces by 2026 (Moran, 2023). Planned initiatives to reach this goal include low-cost loans to childcare providers to build more spaces, funding increased training of ECEs, and loan forgiveness for Early Childhood Education students (Prime Minister of Canada, 2024).

This study builds on an environmental scan of Canada's early childhood education system that underscored persistent and severe staffing shortages in Ontario childcare (Gorica et al., 2023). A well-trained ECE workforce is integral to the quality of early childhood programs (Halfon, 2021). Preservice ECEs in Ontario typically complete a two-year diploma program at a postsecondary institution approved by the College of Early Childhood Educators (CECE), the province's professional regulatory organization. Diploma program students complete college classroom coursework and field placements in early childhood environments. Once registered with the College of Early Childhood Educators (2023), ECEs work primarily in childcare centres and other educational contexts like kindergarten classrooms and before- and after-school programs. To remain in good standing with the College of Early Childhood Educators, registered ECEs are required to complete at least 20 hours of professional learning activities each year and maintain a portfolio that demonstrates their ongoing learning and growth (Gorica et al., 2023).

Through increased subsidies under the new CWELCC system, childcare costs for Ontario families have decreased by half since 2021 (Government of Canada, 2022). The early childhood sector, already plagued by persistent issues with workforce recruitment and retention (Akbari, 2021), faces greater challenges to meet increasing demand amid staffing shortages (Seward et al., 2023). To fulfill its plans for early learning and care system expansion, Ontario will need an estimated additional 8,500 new ECEs and childcare workers (Powell & Ferns, 2023). Although an average of 4,800 new applicants registers annually with the College of Early Childhood Educators (2023), half of the new ECEs leave the field within five years (Ali et al., 2022).

Research on the contributing factors to the high turnover rate points to low wages (Powell et al., 2021; Richardson et al., 2023) and multiple factors leading to burnout (Ali et al., 2022) including chronic work stress (Powell et al., 2021) and lack of professional recognition (MacDonell & McCorquodale, 2019). Maslow's (1943) hierarchy of needs provides a theoretical basis for these findings. If ECEs cannot satisfy their physiological needs (e.g., hunger, sleep), safety needs (e.g., a savings account, employee health and dental plan) or esteem needs (including esteem from others), they cannot attend to self-actualization (i.e., achieving one's full potential in professional life).

To attract and retain more early childhood professionals, the Government of Ontario (2023) has increased the starting wage to \$23.86 per hour for Registered ECEs working in the CWELCC system. At about \$6 per hour above minimum wage (Government of Ontario, 2024), this rate will bring ECEs in many regions into the range of a living wage. But nearly half of Ontarians live in the Greater Toronto Area, where residents need \$25.05 per hour to make a living wage, the amount required to make ends meet in a single-parent household with one child or a double-parent household with two children (Coleman, 2023). The new starting wage also falls short of the \$30-\$40 per hour minimum range recommended by advocates (Cleveland, 2024) to ensure the success of the CWELCC system.

## Method

The research purpose was to explore recent graduates' intentions when they applied to the ECE preservice program, their experiences during training, and job search and career decisions after graduation. Three research questions guided this study: 1) What factors influence students' ECE program selection when applying to college? 2) What are recent graduates' career-related experiences during ECE preservice training and after graduation, and what factors affect their career intentions, decisions, and movements? 3) What are ECE graduates' perceptions of themselves, the ECE field, and their career pathway?

Mixed-methods research designs in the social sciences can help to paint a more holistic picture of a phenomena than any single method through consideration of meanings obtained from qualitative methods, such as interviews, combined with the prevalence of traits identified through a survey (Wasti et al., 2022). This research utilized a two-phase, mixed-methods sequential explanatory design (Ivankova et al., 2006). In phase one, primarily quantitative data was gathered through an online questionnaire developed by the researchers for the purpose of this study. Data collected in phase one was used to inform the development of qualitative data collection tools used in the second phase, the structured interview and focus group protocols.

### Phase One

The first phase questionnaire was piloted for this study online using Qualtrics software. Prospective questionnaire participants were recruited with a poster emailed to distribution lists of the college alumni office and a regional child development organization. Sampling methods included convenience sampling (Creswell & Guetterman, 2019), including participants who were able to be contacted and willing to participate, and snowball sampling; by sharing the questionnaire link, participants could invite others who might be eligible to participate.

Phase one data collection occurred in the fall of 2023. Following the informed consent acknowledgement, the beginning of the questionnaire stated that in order to be eligible to participate, participants needed to be Early Childhood Education graduates from the college who completed the program between 2022 and 2023. Each respondent needed to affirm that they met the requirement and supply their graduation month and year. All respondents graduated between spring 2022 and fall 2023, meaning that they had completed their preservice training within the previous 20 months. After a series of demographic questions, the questionnaire involved three sections on respondents' experiences, intentions, and perceptions before, during, and after program completion. The post-program section contained two pathways: one for respondents working in the field and another for those who were not. Survey questions included binary (yes/no), multiple choice, rating scales, and short answer, and took about 15 minutes to complete.

A sample of 56 recent graduates of an Early Childhood Education diploma program from a college in Ontario completed the questionnaire. The college student body is comprised of both domestic and international students. Through classroom coursework and two field placements, students learn child development and curriculum theory, best practices in caring for young children, and how to plan and implement early learning experiences for infants to school-aged children. Field placements occur in a variety of early learning and care contexts, mainly: licensed childcare centre infant, toddler, and preschool rooms; elementary school kindergarten classrooms; before- and after-school programs for school-aged children; and government-run drop-in centres for families with young children.

Eligible participants who finished the questionnaire were asked if they would like to be entered into a draw to win a \$50 gift card and/or if they would be willing to participate in a follow-up individual interview or focus group. In a separate section, interested participants needed to provide a contact email address or phone number where they could be reached and, if willing to participate in an interview or

focus group, to indicate a preference for in-person or videoconference format. No identifying information was collected from participants who opted out.

Descriptive statistics were generated from the quantitative data on the online questionnaire, and qualitative responses were reviewed. This initial analysis was used to refine questions on the individual interview and focus group protocols. Table 1 describes the demographic profile of first-phase participants. Most (91%) indicated a preference to use the pronouns she/her, while 4% preferred he/him and less than 2% preferred not to answer. The most common age range was 21-25 years (42.9%). South Asian was the most common ethnicity (41.4%); European was the second most common (13.8%). The percentage of participants who were Canadian citizens by birth (35.7%) was slightly greater than the amount holding a work or study visa in Canada (33.9%).

**Table 1**  
*Demographic Characteristics of Questionnaire Respondents (n = 56)*

	N (%)
<i>Preferred Pronouns</i>	
She/her	51 (91.1)
He/him	4 (7.1)
They/them	0
Prefer not to answer	1 (1.8)
<i>Age</i>	
Under 20	2 (3.6)
21-25	24 (42.9)
26-29	8 (14.3)
30-35	7 (12.5)
36-39	4 (7.1)
40-45	5 (8.9)
46-49	1 (1.8)
50 and above	4 (7.1)
Prefer not to answer	1 (1.8)
<i>Ethnicity (select all that apply)</i>	
African (e.g. South African, Somalian, Kenyan descent)	6 (10.3)
European (e.g. Italian, United Kingdom, Portuguese descent)	8 (13.8)
East Asian (e.g. Chinese, Japanese, Korean, Taiwanese descent)	3 (5.2)
Latin American (e.g. Hispanic, Caribbean, South American)	6 (10.3)
Indigenous (e.g. First Nations, Inuk/Inuit and/or Metis)	0
South Asian (e.g. Bangladeshi, Indian, Indo-Caribbean, Pakistani, Sri Lankan descent)	24 (41.4)
Middle Eastern (e.g. Arab, Persian, West Asian, Afghan, Egyptian, Iranian, Kurdish, Lebanese, Turkish descent)	6 (10.3)
Southeast Asian (e.g. Cambodian, Filipino, Indonesian, Thai, Vietnamese descent)	1 (1.7)
<i>Citizenship Status</i>	
Hold a study or work visa in Canada	19 (33.9)
Permanent Resident in Canada within the last 5 years	1 (1.8)
Permanent Resident in Canada more than 5 years	3 (5.4)
Canadian citizen by birth	20 (35.7)
Naturalized Canadian citizen	12 (21.4)

## Phase Two

Participants who indicated a willingness to participate further were contacted; 10 questionnaire participants were interviewed individually and eight participated in focus groups. Participants first answered questions about their impressions of the online questionnaire itself to provide the investigators with understandings about the participant experience with the tool, which was employed for the first time in this study. Next, participants answered open-ended questions prompting them to elaborate on their career-related experiences and perspectives before, during, and after the diploma program. Focus groups were approximately 1.5 hours in length and individual interviews lasted up to 40 minutes; all took place via videoconference and were audio recorded. As approved by the research ethics board, each Phase 2 participant received a \$20 gift card for their contributions to the study.

Interview and focus group audio was transcribed using otter.ai transcription software, then the transcriptions were manually checked for accuracy to the recording. Participants were sent transcriptions and invited to member check, a process to increase study credibility in which participants can review and make changes if desired (Lapan & Armfield, 2009). Transcripts were then manually coded through careful line-by-line analysis (Strauss & Corbin, 1998). During the initial coding process, codes were grouped within predetermined categories: participants' career intentions and perceptions of the field; and by subgroup: before, during, and after the program. Next, through iterative manual focused coding (Creswell & Guetterman, 2019), the researchers repeatedly reread and refined codes.

The researchers employed investigator triangulation (Fusch et al., 2018) at the data analysis stage, an additional credibility measure to enhance neutrality and decrease the influence of researcher bias. Each team member individually conducted initial coding of focus group and interview transcripts to identify potential concepts that could be developed into themes and findings (Bingham, 2023). Once this preliminary analysis was completed independently, the team communicated to share and triangulate their codes to identify potential themes and relationships between themes. Once each theme was assigned a highlight color, the data was reread multiple more times and sections of text that fit into identified themes were highlighted in the appropriate color. This analysis of qualitative, phase two data was considered along with first phase data to provide context for (Ivankova et al., 2006) the questionnaire results.

## Results

Combined results from both study phases are organized below into three temporal periods, pre-program, during program, and post-program, to address participants' career-related intentions, experiences, and perceptions of the profession. Each results section presents pertinent descriptive statistics from the questionnaire along with salient findings from follow-up interviews and focus group transcripts.

### Preprogram Career-Related Intentions

Questionnaire participants were asked a series of questions to recall their experiences, perceptions, and intentions before the program. They were asked if the Early Childhood Education program was their first choice when applying for college programs and if not, to explain. The program was not the first choice of 12% of respondents. A few participants opted for it after exploring an unrelated career path that turned out not to be right for them. Others chose Early Childhood Education as a backup but enrolled for practical reasons, including proximity to home, affordability, difficulty finding a job in their field of choice, or not getting into their first choice of program.

The Early Childhood Education program was the first choice of most (85.5%) phase one participants. When asked, "What were your career goals when entering the program? Select all that apply.", the most common goals indicated were: to work in licensed childcare centres as an ECE (selected by 57.1% of participants); to work in a kindergarten class (50%); to work with non-childcare community organizations to support families with young children (32%); and to open one's own child care centre (19.6%) or home child care (16.1%). Twenty out of 56 phase one participants (35.7%) selected "to continue further education" (e.g., attend teacher's college) after program completion as a career goal. Just 6/56 (10.7%) indicated that they were unsure of their career goals at the time of program entry. No participants selected "none of these options apply," meaning that at the time of program entry, all questionnaire participants had career goals to work in early childhood, and/or further their education, and/or were unsure of their career goals.

Just seven of 18 interview and focus group participants indicated that they wanted to become ECEs when they entered the program. One participant stated, "I've always had a love and passion for children and wondered, how can I use that?" For others, the program was seen as a path to a different goal. For one interviewee, the ECE curriculum could provide the information she wanted to meet her own child's developmental needs. One international student enrolled with the misunderstanding that the diploma would be the credential required to become an elementary school teacher. For multiple other international graduates who came to Canada to study, Early Childhood Education represented a pathway to becoming a permanent resident. One interviewee had asked friends, "What's the best career that can help you to

immigrate?" Multiple international student participants selected the program because it was faster and more affordable than a degree. One explained, "I do not feel that I was necessarily intentionally looking for Early Childhood Education programs. When I was exploring my options when moving to Canada...the ECE program was the best fit in terms of being a two-year program that was within the education field that I could afford."

### Pre-program Perceptions of the Field

Most questionnaire participants indicated that they had previous experience working with young children in contexts such as babysitting, volunteer roles, and caring for their own family members. Just 12.5% indicated that they had no previous experience working with young children before entering the diploma program. Despite most participants' familiarity with working with young children pre-program, most participants were not familiar with working conditions in Ontario childcare. Table 2 shows phase one participant responses to the question, "Were you aware of the general working conditions in childcare before applying for the ECE program?" Taken together, two-thirds of respondents were somewhat aware (50%) or not at all aware (16%) of working conditions in childcare compared to similar fields. Most participants were either somewhat aware (53.6%) or not at all aware (30.4%) of the level of professional autonomy granted to childcare workers. Nearly two-thirds of respondents were somewhat aware (42.9%) or not at all aware (21.4%) pre-program of the social recognition of the role of childcare staff. And 44.6% of respondents were somewhat aware and 32.1% were not at all aware of vacation benefits of childcare staff.

**Table 2**

*Participants' Rating of Their Own Preprogram Awareness of Childcare Working Conditions (n = 56)*

	Not at all Aware	Somewhat Aware	Well Aware	Fully Aware
Working conditions in Ontario childcare comparable to similar fields (e.g. teaching in schools)	9 (16.07%)	28 (50%)	15 (26.79%)	4 (7.14%)
Salary provided for working in childcare compared to other fields	19 (33.93%)	21 (37.5%)	12 (21.43%)	4 (7.14%)
The level of professional autonomy granted to childcare workers	17 (30.36%)	30 (53.57%)	6 (10.71%)	3 (5.36%)
Vacation benefits of childcare staff	18 (32.14%)	25 (44.64%)	11 (19.64%)	2 (3.57%)
Working hours in childcare centres	7 (12.50%)	25 (44.64%)	15 (26.79%)	9 (16.07%)
Social recognition of the role of childcare staff	12 (21.43%)	24 (42.86%)	12 (21.43%)	8 (14.29%)

Nearly three-quarters of questionnaire participants indicated that they were either somewhat aware (37.5%) or not at all aware (33.9%) of the salary for childcare workers in comparison with other fields. When asked, "What were your annual salary range expectations when you entered the ECE program?", 19.7% of phase one participants indicated an expectation of an annual salary range of \$60,000 and above and 26.8% had no previous knowledge about the salary range.

A major theme in the interview and focus group data was that the reality of ECE work was not what participants had envisioned pre-program. Just two phase two participants expressed that they were aware of the working conditions in the field prior to beginning the diploma program; both had previous work experience in Ontario childcare and enrolled in the program to continue in the field but in more desirable roles. One shared,

I worked in daycares but it was too demanding... my reason to do ECE was to get into a school board.

The second participant explained,

I knew it was a low paying job; it was a somewhat low status job. We are not seen as professionals. The hours and working conditions are usually not very good. That was all stuff I was already aware of.

Other interview and focus group participants expressed that they did not know what to expect with

regard to childcare working conditions. This was especially noted by participants who had enrolled as international students. As one interviewee recalled,

I didn't know anything about ECE... ECE is not a thing in [my country of origin].

### **Experiences During the Program**

Phase one participants were asked Likert-scale questions about their perceptions of the Early Childhood Education program faculty, field placements, and field placement mentors. When asked to rate the support and guidance provided by faculty and instructors throughout the program, the top answers were 'excellent,' selected by 33/56 participants (58.9%), 'good,' selected by 12 participants (21.4%), and 'average,' selected by 9 (16.1%). In response to the question, "How well did your field placements provide you with practical experiences and opportunities for hands-on learning in the ECE field?", half of respondents (28/56) selected 'very well,' 16 (28.6%) selected 'well,' and 6 (10.7%) selected 'moderately.' And when asked to rate the support and guidance provided by their ECE mentors at their field placements, the top responses were 'excellent,' indicated by 26/56 participants (46.4%), 'good,' selected by 19 participants (33.9%), and 'average,' selected by 8 (14.3%).

During phase two, a salient theme to emerge in conversations about field placement experiences was how varied they were. One participant noticed that the social status of the ECEs and the respect that they received varied in different early learning and care contexts. One interviewee noted the differences as a challenge:

Every childcare centre is different; some have certain ways of doing things versus other childcare centres... And then it's just a learning curve, like, how do I readjust the knowledge that I already have? And now make it fit and apply it to the setting that I'm currently in?

While another interviewee shared how the differences in settings helped in determining her next short-term career intention:

After my practicums, I knew that I wanted to be in a childcare center rather than a school. So that kind of changed a little bit because I was kind of open to both ideas at the beginning. And then I was kind of like, you know what? I really enjoyed the childcare center. I think that's where I want to be.

### **Post-Program Career-Related Intentions**

Among questionnaire participants, 93% had registered with the College of Early Childhood Educators, the provincial ECE professional regulatory body. When asked, "At the time that you graduated from your ECE program, what were your career plans? Select all that apply", the top selections were: "to work in licensed childcare centres" (60.7% or 34/56 participants); "to work with children in schools including kindergarten programs" (44.6% or 25/56 participants); and "to work with community organizations other than childcare that support children and families" (25% or 14/56). Seventeen out of 56 participants (30.4%) included continuing to further their education in their career plans at the time of graduation.

All questionnaire participants were asked if the job search experience impacted their career plans since graduating from the ECE program. Seventeen percent of respondents indicated yes, they had considered a change in their career plan after experiencing the post-program job search. These participants noted the need for a higher salary or better work-life balance, while one participant wanted to get a job with a school board but had not been successful.

### **Working ECEs**

The questionnaire asked participants, "Are you currently working in the ECE field in a paid position?" Participants who chose 'yes' were directed to one series of questions and participants who chose 'no' were directed to a separate series.

Three-quarters (75%) of questionnaire respondents were working in the ECE field. When asked about their job title and employer, two-thirds of respondents (67%) were working as an ECE in a childcare centre and 3% worked in licensed, home-based care. Most participants (86%) had an annual salary of less

than \$50,000. In addition to their work as an ECE, 37% indicated that they concurrently held a second job. When asked to explain, most participants with a second job stated that it was outside the field of education, including the restaurant and retail sectors. One wrote,

2 supply jobs and a part-time evening job just to make ends meet. It's exhausting.

Fourteen of 18 phase two participants were working as ECEs: 11 in childcare centres, two in before- and after-school programs, and one in a parent and child drop-in centre. Just three of the 11 ECEs working in childcare centres envisioned their future at a childcare centre; of these, only one intended to stay in their current position for the foreseeable future. Two participants intended to stay in centre-based care, but in more desirable positions.

Most of the working ECEs (11 out of 14) who participated in an interview or focus group intended to make a change. Two participants working in childcare centres wished to secure early childhood positions in a different context (at a school board or in a parent-child drop-in centre). Others wished to further their education and/or leave the field after gaining experience, and/or when they could afford to further their education, and/or once their status in Canada was secured. As one interview participant stated,

I'm thinking that after maybe gaining a little bit more experience in this field, I'm planning to study further.

Another interviewee explained,

I'm an international student, I don't have that much resources or money to fund another course. So, I would like to have my status here first. And then maybe later, I was thinking of going into therapy.

Another international interviewee shared:

I didn't think I'll be working in the field at this time, because I had gotten my admission to [university], for a Master's degree. And then I was hoping to get a scholarship. Well, I didn't get the scholarship. And then, also, they took a long time to get back to me. And I didn't want my status in Canada to expire. So, I just switched to my work permit. And now I have the admission waiting, and I'm like, international school fees are a lot. So, I'm trying to get my PR [permanent resident status] first to be able to go. And if that happens within the course of the year, I would most likely be doing a Master's in Education.

### ***Career Intentions of Participants Not in the Field***

Of the total sample of phase one recent graduates, 25% indicated that they were not employed in the ECE field. Among this subset, most respondents were either furthering their education (36%) or still searching for a position in the ECE field (29%). Fourteen percent intended to pursue a different career path outside of ECE.

Four of 18 interview and focus group participants were not in the early childhood field; two were furthering their education and two were working in other fields for financial reasons. One of these participants hoped to return to working as an ECE in the future, but had taken a better-paying position outside the field because they had a family to support.

### ***Post-Program Five-Year Plans***

All questionnaire participants were asked, "Consider your career plan in the next five years. What would motivate you to return to or continue working in the ECE field?" Table 3 depicts the response rates to this multiple-choice question. One-fifth (21.3%) of participants would not consider working in the ECE field in the next five years and 36% would consider returning to the ECE field if the working conditions and salaries improve. Just 13% planned to continue working in the ECE field regardless of changes in the field. And 21% planned to continue working in the ECE field to improve the working conditions and compensations for ECEs.

**Table 3***Phase One Participants' Five-Year Career Plans (n = 47)*

I will not consider working in the ECE field in the next five years	21.28%
I will consider returning to working in the ECE field if there are more jobs available	6.38%
I will consider returning to the ECE field if the working conditions and salaries improve	36.17%
I will continue working in the ECE field regardless of changes in the field	12.77%
I will continue working in the ECE field to improve the working conditions and compensations for ECEs	21.28%
Other	2.13%

### Post-Program Perceptions of the Field

When asked, *Would you recommend the ECE profession to others?*, 34% of questionnaire participants who were working in the field indicated, 'No.' In short-answer explanations, participants wrote about low pay, long hours, stress, and physical and mental exhaustion. One respondent stated,

It is rewarding but not realistic for long-term goals.

All focus group and interview participants, whether currently working in the field or not, shared their perceptions of the profession. Most spoke of coming to understand the critical importance of children's early years and the significant role that early childhood professionals play in young children's development. ECE was repeatedly described as a rewarding and fulfilling profession. One interviewee who worked and intended to stay in childcare said,

I want to be crawling around on the ground wiping noses and getting covered in paint, and singing silly songs like that. That is me inside. Yeah, that's where I want to be.

Yet barriers to staying in the profession emerged as a major theme in the phase two data. These included high child-educator ratios, unmanageable workload, job stress, low status, and low pay. One participant stated,

We're not really highly respected, as a professional. It's still parents thinking you are just taking care of children and everyone can do it.

Another explained,

I know for some of my friends, they had jobs lined up very quickly. But it was an issue of how much we weren't getting paid for a job that we find to be so valuable, important and essential to society. It was a little bit disappointing for most of us.

One working ECE was unable to take sick days due to a staff shortage, and so continued to work through an illness, resulting in becoming sicker and the need for a hospital visit. In another instance, an interviewee intended to leave the profession to become:

...Anything else but being an educator. Even though I really love working with children, that's the only thing I'm passionate about. But what I see now, from behavior, attitude, and disrespect, and the low wage... I don't get paid that much. I'm sorry. We can be realistic, right? I need to afford my children. I need to pay rent. I need groceries. No. And above all of this, I don't see appreciation or respect or anything. No.

### Conclusion and Discussion

According to the College of Early Childhood Educators (2023), the largest age range cohort of its members is 25-34 years, and 56% of employed registered ECEs work in licensed childcare in a centre or home. Phase one participants in this study tended to be younger, with 21-25 being the largest age range cohort, and a higher percentage of working ECEs worked in childcare centres (67%) or licensed home-based care (3%). Study participants closely shared two other key demographic attributes with Ontario ECEs, 96% of whom are women and one-third of whom are immigrants or non-permanent residents (McCuaig et al., 2022).

Internationally and within Canada, early childhood education continues to be a pink-collar field, a highly gender-segregated, mostly female occupation plagued by low status and low mobility (Barnes et al., 2020). Moreover, the most difficult and lowest-paid care positions are often filled by female immigrants to

Canada (McCuaig & McWhinney, 2021), adding stress and poverty to the discrimination and subordination they may face, compounding their marginalization within the nation's gendered and racialized neocolonial labour hierarchies (Mooten, 2021). The perspectives and experiences of this participant sample should be of interest to social justice-oriented policy makers wishing to tackle the povertization of immigrant and racialized women (Statistics Canada, 2024) and longstanding immigration system bias (Mooten, 2021).

This research aimed to gain insights from participants who may be otherwise left out of research literature: trained ECEs who do not enter the field or who may leave the field after a short time. The study achieved this goal, as the sample included participants who had not entered the field and did not intend to, in addition to participants who had entered the field but intended to leave within five years' time. Future research with recent ECE graduates would be useful to inform policies and programs to attract and retain new professionals.

### **Method and Preprogram Intentions**

The use of a two-stage, mixed-methods sequential explanatory design (Ivankova et al., 2006) was helpful in this research because follow-up interviews and focus groups provided important contextual understandings about data collected in phase one. An example of this pertained to preprogram career intentions. For most phase one participants, ECE was the first choice of program at entry, and no participants indicated an intended career goal outside of working as an ECE in some capacity (childcare centre, school board, community organization, etc.). It was not until discussions with phase two participants who had been international students that ECE as a pathway to Canadian residency rather than a long-term career goal emerged as a salient theme.

### **Pre-program Perceptions of the Field: Salary and Working Conditions**

Most phase one participants had pre-program experience with young children, an expected finding following previous research indicating that one's beliefs about one's own abilities is a factor in postsecondary program choice (Altonji et al., 2015). One-fifth of questionnaire participants overestimated their salary expectations pre-program, a finding consistent with research demonstrating that college students tend to overestimate salary expectations (Schnusenberg, 2020). Moreover, over one-quarter of participants in this study had no previous knowledge about the salary range, echoing a study finding that community college students have limited information about labor market outcomes, including salaries (Baker et al., 2017).

Existing literature on ECE work paints a vivid portrait of an intrinsically rewarding career (McDonald et al., 2018), undervalued by society (Ali et al., 2022; MacDonell & McCorquodale, 2019; Powell et al., 2020) and characterized by high stress (Ng et al., 2023; Powell et al., 2021; Stein et al., 2024), low pay (Richardson et al., 2023; Seward et al., 2023), and poor employee benefits (Halfon, 2021; McCuaig et al., 2022). Preprogram, most questionnaire participants were only somewhat aware or were unaware of childcare working conditions, social recognition of the role of childcare staff, salary, and vacation benefits. This lack of awareness of the realities and remuneration of childcare work at the time of program registration underscores the need for vocational counselling for postsecondary students to develop a more comprehensive understanding of their potential future career (Gu & Zhu, 2023).

Among the 18 phase two participants, just two expressed a pre-program awareness of working conditions in Ontario childcare, both due to previous work experience. Notably, both participants were working as ECEs at the time of this study and expressed an intention to remain in the field in the future. This finding could lead to intriguing avenues of future research into the nature of the relationship between ECE career attrition rates and previous experience in the field, and the usefulness of cooperative education programs, immersive experiential programs that provide high school students with skills and knowledge to make informed career choices (Ontario Ministry of Education, 2018).

### **During-Program Experiences**

Most phase one participants reported positive to neutral experiences with program faculty, field

placements, and field placement mentors. The key theme to emerge during phase two interviews and focus groups related to the during-program experiences was the variation in the field placement settings. Participants found this variation to be challenging, but also helpful in determining their preferred employment contexts post-graduation.

### **Post-Program Career-Related Intentions**

After completing the diploma program, most phase one participants took the step of paying over \$240 (application plus registration fees) to join the College of Early Childhood Educators, enabling them to seek and secure employment as Registered ECEs in the province of Ontario. Yet less than half of questionnaire participants considered ECE as their five-year career plan: 21% would not consider working in the field in the next five years, and 36% would only consider the field if the working conditions and salaries improve. In view of the finding that over half of the recent ECE graduates in this sample already do not envision a future in that career with or without substantive changes in the field, this calls into question the promise of government schemes like a slight raise in starting pay and loan forgiveness to effectively address staffing shortages. Although there is limited research literature on government-sponsored tuition reimbursement outcomes to address labor shortages in another caring profession, nursing (Duru & Hammoud, 2022), no research could be located on the impact of tuition reimbursement, loan forgiveness, or debt relief for ECE. Research on the Canadian government's loan forgiveness scheme (Prime Minister of Canada, 2024) is recommended to understand the connection, if any, between this planned investment of public money and the recruitment and retention of ECEs.

### **Post-Program: Desirability and Working Conditions of Centre-Based Jobs**

Results of this research indicate a disconnect between the need for ECEs to work in childcare centres, the government's intention to fund centre-based care expansion, and recent graduates' intentions. For the 67% of questionnaire participants working as ECEs post-program, a childcare centre was where they had secured a position. This is an expected finding in light of the need for ECEs in childcare centres (Seward et al., 2023). Due to the small study sample, more research about the desired workplace context of recent ECE graduates is needed in order to make generalizations. Nevertheless, it is noteworthy that just three of the 11 phase two participants working in a childcare centre expressed the desire to continue working in centres. Current government efforts to lure prospective professionals to the field to address the ECE shortage in centre-based care will have limited efficacy if trained ECEs who obtain employment in centres do not wish to stay in centres. This finding underpins advocacy messaging (Association of Early Childhood Educators Ontario, 2016b; Ontario Coalition for Better Child Care, 2015) and research literature (McCuaig et al., 2022; Richardson et al., 2023) calling for improvements to Ontario childcare working conditions.

The need for better working conditions and remuneration also emerged through participants' accounts of the barriers to remaining in the profession. Among phase one participants, 34% would not recommend the profession to others for reasons related to pay and working conditions (i.e., hours, stress, and exhaustion). Phase two participants experienced these same barriers, as well as high educator/child ratios and the consequences of staff shortages. Among phase one participants working as ECEs post-program, 37% held a second job. Considered together, given these downsides already experienced by recent graduates of an ECE training program, it is little wonder that the field is associated with a high risk of burnout (Ali et al., 2022; Ng et al., 2023; Stein et al., 2024). In addition to raising ECE wages further above the level of a living wage, governments should focus on workplace policy creation that bolsters educator well-being long-term, so that those invaluable trained professionals who actually want to stay, are able to stay.

### **Future Research and Limitations**

The phase one questionnaire was a snapshot, collecting data from participants at a single point in time post-program and asking them to recall their pre-program perceptions and intentions. This limitation could be addressed in future research through a longitudinal design. The data collection tools used in this research were being piloted; future research with these instruments with a larger sample of graduates from

multiple post-secondary institutions would provide information about the reliability of the quantitative questions and the generalizability of results to Ontario Early Childhood Education graduates.

This study explored the career-related intentions and perceptions of recent ECE diploma program graduates. Data indicated that while some participants intended to stay in early childhood, for others, ECE is a temporary stepping stone, and the intention to move on was present even at the time of program entry. For many participants, ECE was perceived as a vital profession, but not a desirable one, particularly with regard to centre-based employment. This calls into question the usefulness of current and planned government funding strategies to recruit and retain new Ontario ECEs through loan forgiveness and additional funding for increased training of new ECEs. Future research and funding to strengthen the ECE sector should focus on attracting students who understand the field and want to work in it and supporting recent graduates to overcome barriers to staying in the profession.

## Declarations

### *Authors' Declarations*

**Acknowledgements:** We would like to acknowledge the participation of the early childhood educators in the study.

**Authors' contributions:** All authors contributed to the study and manuscript equally.

**Competing interests:** The authors declare that they have no competing interests.

**Funding:** This study has been supported by a grant from the office of research of Sheridan College.

**Ethics approval and consent to participate** The study was approved by the Research Ethics Board of Sheridan College.

### *Publisher's Declarations*

**Editorial Acknowledgement:** The editorial process of this article was completed under the editorship of Dr. Adrijana Visnjic Jevtic through a double-blind peer review with external reviewers.

**Publisher's Note:** Journal of Childhood, Education & Society remains neutral with regard to jurisdictional claims in published maps and institutional affiliation.

## References

- Akbari, E. (2021). New cross-Canada research highlights an early childhood educator recruitment crisis. *The Conversation*. <https://theconversation.com/new-cross-canada-research-highlights-an-early-childhood-educator-recruitment-crisis-160968>
- Ali, A., Giesbrecht, D., Turner, J., McMillan, R., & Kennell, S. (2022). *The burnout crisis: A call to invest in ECE and child and youth care workers*. Canadian Child Care Federation. <https://cccf-fcsge.ca/wp-content/uploads/2022/09/The-Burnout-Crisis-EN.pdf>
- Altonji, J. G., Arcidiacono, P., & Maurel, A. (2015). *The analysis of field choice in college and graduate school: Determinants and wage effects*. NBER Working Paper Series, 21655. <https://doi.org/10.3386/w21655>
- Association of Early Childhood Educators Ontario. (2016a). "I'm more than 'just' an ECE": Decent work from the perspective of Ontario's early childhood workforce. <https://childcarecanada.org/sites/default/files/Im%20more%20than%20just%20an%20ECE.pdf>
- Association of Early Childhood Educators Ontario. (2016b). Professional pay and decent work for all. *eceLINK*. [https://d3n8a8pro7vhmx.cloudfront.net/aeceo/pages/889/attachments/original/1459868832/Professional\\_pay\\_article\\_Spring16.pdf?1459868832](https://d3n8a8pro7vhmx.cloudfront.net/aeceo/pages/889/attachments/original/1459868832/Professional_pay_article_Spring16.pdf?1459868832)
- Baker, R., Bettinger, E., Jacob, B., & Marinescu, I. (2017). *The effect of labor market information on community college students' major choice*. NBER Working Paper Series, 23333, 23333-. <https://doi.org/10.3386/w23333>
- Barnes, T. D., Beall, V. D., & Holman, M. R. (2021). Pink-collar representation and budgetary outcomes in US states. *Legislative Studies Quarterly*, 46(1), 119–154. <https://doi.org/10.1111/lsq.12286>
- Bingham, A. (2023). From data management to actionable findings: A five-phase process of qualitative data analysis. *International Journal of Qualitative Methods*, 22, 1-11. <https://journals.sagepub.com/doi/full/10.1177/16094069231183620>
- Brown, C. P., & Englehardt, J. (2016). Conceptions of and early childhood educators' experiences in early childhood professional development programs: A qualitative metasynthesis. *Journal of Early Childhood Teacher Education*, 37(3), 216–244. <https://doi.org/10.1080/10901027.2016.1204574>
- Cleveland, G. (2024). *Roadmap to universal child care in Ontario*. Policy brief 2: Ontario childcare funding formula. Association of Early Childhood Educators Ontario and Ontario Coalition for Better Child Care. [https://assets.nationbuilder.com/childcareon/pages/2711/attachments/original/1714574468/Funding\\_formula\\_brief\\_May\\_2024.pdf?1714574468](https://assets.nationbuilder.com/childcareon/pages/2711/attachments/original/1714574468/Funding_formula_brief_May_2024.pdf?1714574468)

Recent early childhood education graduates' career aspirations...

- Coleman, A. (2023). *Calculating Ontario's living wages*. Ontario Living Wage Network. [https://assets.nationbuilder.com/ontariolivingwage/pages/110/attachments/original/1699276527/Calculating\\_Ontario's\\_Living\\_Wages\\_-\\_2023.pdf?1699276527](https://assets.nationbuilder.com/ontariolivingwage/pages/110/attachments/original/1699276527/Calculating_Ontario's_Living_Wages_-_2023.pdf?1699276527)
- College of Early Childhood Educators. (2023). *Membership data report: 2022–2023 fiscal year*. [https://www.college-ece.ca/wp-content/uploads/2023/10/2022-2023\\_Membership\\_Data\\_Report\\_EN\\_Final.pdf](https://www.college-ece.ca/wp-content/uploads/2023/10/2022-2023_Membership_Data_Report_EN_Final.pdf)
- Creswell, J. W., & Guetterman, T. C. (2019). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research (6th ed.)*. Pearson.
- Duru, D. C., & Hammoud, M. S. (2022). Identifying effective retention strategies for front-line nurses. *Nursing Management*, 29(1), 17–24. <https://doi.org/10.7748/nm.2021.e1971>
- Elango, S., Hojman, A., García, J. L., & Heckman, J. J. (2016). Early childhood education. In R. Moffitt (Ed.), *Means-Tested Transfer Programs in the United States II* (pp. 235-297). University of Chicago Press. <https://www.nber.org/books-and-chapters/economics-means-tested-transfer-programs-united-states-volume-2/early-childhood-education>
- Fusch, P., Fusch, G. E., & Ness, L. R. (2018). Denzin's paradigm shift: Revisiting triangulation in qualitative research. *Journal of Social Change*, 10(1), 19-32. <https://doi.org/10.5590/IOSC.2018.10.1.02>
- Gorica, Y., Jalali-Kushki, Y., Wang, M., & Conforzi, J. (2023). Contributing to a national early learning and child care system in Canada: An environmental scan of early childhood policy and programs. *Publications and Scholarship*. 3. <https://childcarecanada.org/documents/research-policy-practice/24/07/contributing-national-early-learning-and-child-care-system>
- Government of Canada. (2022, Dec 19). *Reducing fees for licensed child care for Ontario families by 50% on average* [Press release]. <https://www.canada.ca/en/employment-social-development/news/2022/12/reducing-fees-for-licensed-child-care-for-ontario-families-by-50-on-average.html>
- Government of Ontario. (2023, Nov 16). *Supporting child care in Ontario* [Press release]. <https://news.ontario.ca/en/release/1004366/ontario-raising-minimum-wage-to-support-workers>
- Government of Ontario. (2024, March 28). *Ontario raising minimum wage to support workers* [Press release]. <https://news.ontario.ca/en/release/1004366/ontario-raising-minimum-wage-to-support-workers>
- Gu, Y., & Zhu, Z. (2023). The impact of college students' salary expectations on career decisions and countermeasures. *International Journal of New Developments in Education*, 5(26), 70-74. <https://doi.org/10.25236/IJNDE.2023.052613>
- Halfon, S. (2021). *Canada's child care work force*. Occasional Paper 35: A Childcare Resource and Research Unit Publication. <https://childcarecanada.org/sites/default/files/OP35-Canadas-child-care-workforce.pdf>
- Ivankova, N. V., Creswell, J. W., & Stick, S. L. (2006). Using mixed-methods sequential explanatory design: From theory to practice. *Field Methods*, 18(1), 3-20. <https://doi.org/10.1177/1525822X05282260>
- Lapan, S. D., & Armfield, S. W. J. (2009). Case study research. In S. D. Lapan & M. T. Quartaroli (Eds.), *Research essentials: An introduction to designs and practices* (pp. 165-180). Jossey-Bass.
- MacDonald, D., & Friendly, M. (2023). *Not done yet: \$10-a-day child care requires addressing Canada's child care deserts*. Childcare Resource and Research Unit. <https://childcarecanada.org/documents/research-policy-practice/23/05/not-done-yet-10-day-child-care-requires-addressing-canada%E2%80%99s>
- MacDonell, M., & McCorquodale, L. (2019). Hidden messages: Barriers toward recognition. *eceLINK: The Peer Reviewed Collection*, 23(2), 19-39. The Association of Early Childhood Educators of Ontario. [https://d3n8a8pro7vnm.cloudfront.net/aecco/mailings/1631/attachments/original/eceLINK\\_Fall2019\\_Finalweb.pdf?1570820616](https://d3n8a8pro7vnm.cloudfront.net/aecco/mailings/1631/attachments/original/eceLINK_Fall2019_Finalweb.pdf?1570820616)
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370–396. <https://doi.org/10.1037/h0054346>
- McCuaig K., Akbari, E., Correia, A. (2022). *Canada's children need a professional early childhood education workforce*. Atkinson Centre for Society and Child Development, Ontario Institute for Studies in Education, University of Toronto. <https://ecereport.ca/en/workforce-report/#ece-workforce>
- McCuaig, K., & McWhinney, T. (2021). *The early childhood education and care workforce. Policy4Women Public Space, Public Engagement: Policy Briefing Note*. Social Sciences and Humanities Research Council of Canada. <https://www.criaw-icref.ca/wp-content/uploads/2021/04/The-Early-Childhood-Education-and-Care-Workforce.pdf>
- McDonald, P., Thorpe, K., & Irvine, S. (2018). Low pay but still we stay: Retention in early childhood education and care. *Journal of Industrial Relations*, 60(5), 647-668. <https://doi.org/10.1177/0022185618800351>
- Mooten, N. (2021). *Racism, discrimination, and migrant workers in Canada: Evidence from the literature*. Policy Research, Research and Evaluation Branch: Government of Canada. <https://www.canada.ca/en/immigration-refugees-citizenship/corporate/reports-statistics/research/racism-discrimination-migrant-workers-canada-evidence-literature.html#s3-3>

- Moran, H. (2023). *2023 Canada-Wide Early Learning and Child Care (CWELCC) system update*. Ontario Ministry of Education. [https://efis.fma.csc.gov.on.ca/faab/Memos/CC2023/EYCC01\\_EN.pdf](https://efis.fma.csc.gov.on.ca/faab/Memos/CC2023/EYCC01_EN.pdf)
- Ng, J., Rogers, M., & McNamara, C. (2023). Early childhood educator's burnout: A systematic review of the determinants and effectiveness of interventions. *Issues in Educational Research*, 33(1), 173–206.
- Ontario Coalition for Better Child Care. (2015). *Child care matters to everyone: A snapshot of child care in Ontario*. [https://assets.nationbuilder.com/childcareon/pages/1355/attachments/original/1450198905/Child\\_care\\_matters\\_to\\_everyone\\_A\\_snapshot\\_of\\_child\\_care\\_in\\_Ontario.pdf?1450198905](https://assets.nationbuilder.com/childcareon/pages/1355/attachments/original/1450198905/Child_care_matters_to_everyone_A_snapshot_of_child_care_in_Ontario.pdf?1450198905)
- Ontario Ministry of Education. (2018). *The Ontario curriculum grades 11 and 12: Cooperative education*. <https://www.edu.gov.on.ca/eng/curriculum/secondary/cooperative-education-2018.pdf>
- Osborne, C., van Rhijn, T., & Breen, A. V. (2018, Fall). Preservice early childhood education degree students' career aspirations: Examining decisions to enter the field. *eceLINK: The Peer Reviewed Collection*, 2(2), 24-44. The Association of Early Childhood Educators of Ontario. [https://d3n8a8pro7vhm.cloudfront.net/aeceo/pages/2449/attachments/original/1539809630/eceLINK\\_Fall2018\\_FINAL\\_web\\_ready.pdf?1539809630](https://d3n8a8pro7vhm.cloudfront.net/aeceo/pages/2449/attachments/original/1539809630/eceLINK_Fall2018_FINAL_web_ready.pdf?1539809630)
- Powell, A., & Ferns, C. (2023). *Position paper on a publicly funded early learning and child care salary scale*. Association of Early Childhood Educators of Ontario. [https://assets.nationbuilder.com/childcareon/pages/2703/attachments/original/1696959386/Salary\\_scale\\_Position\\_Paper.pdf?1696959386](https://assets.nationbuilder.com/childcareon/pages/2703/attachments/original/1696959386/Salary_scale_Position_Paper.pdf?1696959386)
- Powell, A., Ferns, C., & Burrell, S. (2021). *Forgotten on the frontline: A survey report on Ontario's early years and child care workforce*. Ontario Coalition for Better Child Care and Association of Early Childhood Educators Ontario. [https://d3n8a8pro7vhm.cloudfront.net/childcareon/pages/2667/attachments/original/1621427998/Forgotten\\_on\\_the\\_frontline.pdf?1621427998](https://d3n8a8pro7vhm.cloudfront.net/childcareon/pages/2667/attachments/original/1621427998/Forgotten_on_the_frontline.pdf?1621427998)
- Powell, A., Langford, R., Albanese, P., Prentice, S., & Bezanson, K. (2020). Who cares for carers? How discursive constructions of care work marginalized early childhood educators in Ontario's 2018 provincial election. *Contemporary Issues in Early Childhood*, 21(2), 153–164. <https://doi.org/10.1177/1463949120928433>
- Prime Minister of Canada. (2024, May 13). *Creating more child care spaces for families in Ontario*. [Press release]. <https://www.pm.gc.ca/en/news/news-releases/2024/05/13/creating-more-child-care-spaces-families-ontario#:~:text=The%20Prime%20Minister%2C%20Justin%20Trudeau,province%2C%20especially%20in%20underserved%20communities.>
- Richardson, B. M., Vickerson, R., & Bader, N. (2023). Falling by the “wasteland”: Defining and moving towards educator well-being from the perspective of early childhood educators in Ontario, Canada. *Australasian Journal of Early Childhood*, 48(4), 294–306. <https://doi.org/10.1177/18369391231211023>
- Robinson, C., O'Connor, D., & Treasure, T. (2021). Education or care? Childcare or school? Pre-service teacher perspectives on teaching in the childcare sector. *Issues in Educational Research*, 31(4), 1231–1248.
- Santo, A. D., Timmons, K., & Lenis, A. (2017). Preservice early childhood educators' pedagogical beliefs. *Journal of Early Childhood Teacher Education*, 38, 223–241. <https://doi.org/10.1080/10901027.2017.1347588>
- Schnusenberg, O. (2020). Overconfidence in salary expectations after graduation. *Journal of Education for Business*, 95(8), 513–518. <https://doi.org/10.1080/08832323.2019.1707750>
- Seward, B., Dhuey, E., & Pan, A. (2023). The big short: Early childhood education expansion in post-pandemic Canada. *Canadian Public Policy*, 49(3), 306–329. <https://doi.org/10.3138/cpp.2022-059>
- Statistics Canada. (2024). *Just the facts: International women's day*. <https://www150.statcan.gc.ca/n1/pub/89-28-0001/2022001/article/00009-eng.htm#a1>
- Stein, R., Garay, M., & Nguyen, A. (2024). It matters: Early childhood mental health, educator stress, and burnout. *Early Childhood Education Journal*, 52(2), 333–344. <https://doi.org/10.1007/s10643-022-01438-8>
- Strauss, A., & Corbin, J. M. (1998). *Basics of qualitative research: Grounded procedures and techniques (2nd ed.)*. Sage.
- Stronach, R. A. E. (2023). How does learning happen? Ontario's pedagogy of oppression?: A critical discourse analysis of Ontario's early years pedagogical framework. *Canadian Children*, 48(2), 32–50. <https://doi.org/10.18357/jcs482202320982>
- Wasti, S. P., Simkhada, P., van Teijlingen, E. R., Sathian, B., & Banerjee, I. (2022). The growing importance of mixed-methods research in health. *Nepal Journal of Epidemiology*, 12(1), 1175–1178. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9057171/pdf/nje-12-1175.pdf>

# The discursive constructions of evil and related emotions in Finnish pre-primary education

Emma Kurenlahti<sup>1</sup>, Cathryn van Kessel<sup>2</sup>, Saila Poulter<sup>3</sup>, Jaakko Hilppö<sup>4</sup>, Lasse Lipponen<sup>5</sup>

**Abstract:** In this study, we explore how teachers communicate and construct educational ideals concerning evil and emotions to children in the context of Finnish pre-primary education, and how this contributes to the processes of villainification; making out-groups represent evil and/or anti-villainification; contributing to complex understandings of evil. To understand this construction and communication, we focused on a single case that illuminated how two pre-primary education teachers formulated educational ideals concerning evil. For this purpose, we analyzed two data sets by utilizing discourse analysis. The first set consisted of five interviews with the teachers dealing with the topic of evil and education. The second data set included video recordings of two related educational sessions conducted by the teachers with children. The results show that the ideals were constructed and communicated by discursive practices without direct usage of the word “evil”, and these mainly contributed to anti-villainification processes. To prevent a strict binary of good and evil and following polarization in society, more direct exposure of evil is needed in education. In this way, the children can be more aware of the villainification and anti-villainification processes they are involved in through education.

## Article History

Received: 24 February 2025

Accepted: 30 September 2025

## Keywords

Evil; Emotions; Pre-primary education; Ideals of education; Affects

## Introduction

In this study, we explored how educational ideals and related norms concerning evil and emotions are constructed and communicated with children in the context of pre-primary education in Finland. Specifically, we focused on how these ideals and norms contribute to “villainification” (van Kessel & Crowley, 2017), which is the process of simplistically constructing the others and out-groups to represent evil, and/or anti-villainification (i.e., constructing more complex understandings of evil). Exploring evil in education seems important in times of political polarization when others, and not “us”, are often vilified as being evil (Journell, 2024). Instead, to promote more complex understanding of evil and to remedy the division between people, anti-villainification practices that consider both individual and societal culpability are needed in education (van Kessel & Edmondson, 2024). During such polarizing times, even though understandings of evil should be reflected in education and researched in general to gain knowledge of the phenomenon, the topic is often avoided in an effort not to offend anyone (Hunter, 2000; van Kessel, 2019). As a result, there is an overwhelming lack of academic and lay discussions concerning evil in education, and empirical research focusing on the phenomenon is almost non-existent. However, even if the topic is avoided, evil is not erased from education. Instead, it is implicitly constructed, and according to previous studies, individual-related comprehensions of evil are currently formulated through Finnish early childhood and pre-primary education curricula (Kurenlahti et al., 2025), and in discussions

<sup>1</sup> University of Helsinki, Faculty of Educational Sciences, Department of Education, Helsinki, Finland, e-mail: [emma.kurenlahti@helsinki.fi](mailto:emma.kurenlahti@helsinki.fi), ORCID: <https://orcid.org/0000-0002-7288-2159>

<sup>2</sup> Texas Christian University, College of Education, Department of Education, Fort Worth, Texas, Unites States, e-mail: [c.vankessel@tcu.edu](mailto:c.vankessel@tcu.edu), ORCID: <https://orcid.org/0000-0002-7450-5963>

<sup>3</sup> University of Helsinki, Faculty of Educational Sciences, Department of Education, Helsinki, Finland, e-mail: [saila.poulter@helsinki.fi](mailto:saila.poulter@helsinki.fi), ORCID: <https://orcid.org/0000-0002-4687-7313>

<sup>4</sup> University of Helsinki, Faculty of Educational Sciences, Department of Education, Helsinki, Finland, e-mail: [jaakko.hilppo@helsinki.fi](mailto:jaakko.hilppo@helsinki.fi), ORCID: <https://orcid.org/0000-0003-0236-9517>

<sup>5</sup> University of Helsinki, Faculty of Educational Sciences, Department of Education, Helsinki, Finland, e-mail: [lasse.lipponen@helsinki.fi](mailto:lasse.lipponen@helsinki.fi), ORCID: <https://orcid.org/0000-0001-6245-0398>

with older students (van Kessel, 2017). For this reason, to understand the current construction and communication of evil in the education of young children more profoundly, the study of this phenomenon through the analysis of empirical data is crucially important.

Additionally, villainification and anti-villainification processes should be closely scrutinized when it comes to the education of young children as, due to historical trajectories, Western education is often noted to promote dividing and vilifying ways of understanding evil and children (Jenks, 2005; Kurenlahti et al., 2025; Murriss, 2016). In Western societies, children are often understood to be innocent and separate from evil in public institutions, but they can sometimes be constructed as evil in very individually focused ways. The way of comprehending children solely as being innocent can lead to projecting evil onto others in a vilifying manner. In turn, when evil is understood to manifest in the form of an individual child, this understanding can lead to vilifying the child and following harmful and strict child-rearing practices (Jenks, 2005). When children are perceived as evil in Western societies, it is often based on the historical ideas of original sin and Freud's understanding of children as initially corrupted and in need of guidance (Jenks, 2005). Overall, these ideas contribute to understanding children as the "evil Other": developmentally lesser beings who, upon becoming adults, are perceived to still lack goodness and trustworthiness (Murriss, 2016). Hence, they are seen as needing external punishment and discipline to be socialized into adult culture (Jenks, 2005; Murriss, 2016). In this sense, when it comes to a child, the villainification process can also result in strict discipline and punishments due to cultural-historical trajectories informing the sense of evil in education.

To overcome these simplistic and otherizing understandings of children as being developmentally lesser than adults due to their perceived evilness or innocence, research concerning villainification and anti-villainification processes is needed, especially when it comes to the education of young children. In this way, these phenomena can be more profoundly understood and consequently either promoted or prevented in education to avoid the moral divide among people and the strict disciplinary actions aimed at a child who is perceived as solely evil. Also, since the sense of evil is constructed not only by reason but also through emotions and affects attached to evildoers (van Kessel, 2017; Zembylas, 2021), emotional aspects are crucial to be scrutinized when investigating the processes of constructing and communicating evil in education. To achieve this goal and gain novel knowledge concerning education, emotions, and evil, in this study we investigated the construction and communication of educational ideals concerning evil and emotions from the practices utilized by pre-primary teachers who interact with young children daily, including in emotional ways. This approach enables an understanding of how the topic of evil is emotionally communicated in pre-primary education, and how such communication informs processes of (anti)villainification.

In educational research, villainification as a concept has guided studies about a variety of educational situations, in and out of the classroom. Previous studies include educational encounters in places like civil rights centers and museums (Adams & An, 2020), as well as encounters with film and television (Journell, 2020, 2024; Varga & Adams, 2024), and technology (Smits & Krutka, 2024), curricular topics like Holocaust education (Christ et al., 2024; van Kessel & Plots, 2019), histories of anti-Black racism in the United States (Adeniji et al., 2024; Jones, 2024; Wills, 2019), and financial education (Adams, 2024), among other topics. Few studies have engaged with villainification in relation to participant interviews, and, importantly, no studies have focused on interaction with young children. Previous research on evil with youth, villainification, and education has focused on older students (e.g., van Kessel, 2017).

To gain new knowledge of villainification processes and the communication of ideals concerning evil and emotions in the education of young children, we focused on a single case involving the formulation of ideals by the same two teachers. Initially, the first author interviewed two teachers in Finland on the topic of evil and education. After this, she observed two separate educational sessions that the teachers conducted with the child group. In this way, analyzing these two different yet related data sets allowed for a deeper understanding of the communication of ideals concerning evil and emotions, as well as related (anti)villainification processes. The research questions that guided the exploration were: What educational

ideals concerning evil are constructed by teachers during the interviews, and how are these ideals communicated and further constructed in relation to emotions during educational sessions? In the next section, we introduce our theoretical perspectives and the central concepts of the study. Then, we present the materials, methods, and analysis of the study and highlight our findings. Finally, we engage in a discussion with previous literature and illuminate our conclusions.

### **Theoretical Perspective and Central Concepts**

Our theoretical perspective in this study is based on social constructionism (Berger & Luckmann, 1966), and specifically on the discursive construction of reality (Fairclough, 2001; Hjelm, 2011; von Stuckrad, 2013). On this basis, social reality and knowledge are considered to be formulated by social processes and symbolic communication (Berger & Luckmann, 1966; von Stuckrad, 2013). In our study, this symbolic communication is explored by detecting discourses that, as practices of language use, are entangled with affects and emotions and communicate and construct distinct meanings related to comprehensions of evil in the community (Zembylas, 2021).

To understand the discursive construction of educational ideals concerning evil, we approached communities as functioning by the protection and promotion of their moral ideals (Jacobsson & Lindblom, 2016). The construction of educational ideals that concern a moral phenomenon such as evil can be explored by investigating discursive moral commitments in pre-primary education that promote certain goals for right kind of human activity in this distinct context (cf. Jacobsson & Lindblom, 2016). These commitments are manifested as norms and rules of the community that illuminate what can be considered to be ideal moral behavior and emotional expression in different situations and what can be understood as deviation from this in-group morality (Jacobsson & Lindblom, 2016). In this way, in the context of education, moral ideals such as educational goals concerning evil can be understood by studying the discursive construction of the boundaries (norms and rules) that illuminate the ideals by descriptions of in-group behavior and emotional expression. In this study, we understand emotions as culturally and historically constructed phenomena that are informed by the norms and rules of each distinct community (Jacobsson & Lindblom, 2016). From this perspective, some emotions can be understood to be fundamental to the construction of human subjectivity and the reflectivity of the self (Brinkmann, 2018). These fundamental emotions, such as guilt, shame, and grief, can be evaluated based on their appropriateness to every situation, and individuals can be praised or blamed for these emotions as they are expected to be expressed in certain ways in response to specific situations (Brinkmann, 2018). In this sense, the phenomenon of evil can also be accompanied by discursively constructed norms and rules that represent expectations and ideals for certain emotional expressions within the community.

In addition to emotions, affects can also contribute to the discursive formulations of the sense of evil in education (Zembylas, 2021). According to Zembylas (2014; 2021), the construction of evil is utilized by a range of apparatuses, "technologies of affect," such as materials, texts, and discourses, which, when accompanied by affects and emotions, construct the normative in-group (us) and out-group (other) categorizations and good/evil binaries (Zembylas, 2021, p. 223; see also Zembylas, 2014). Following Helmsing (2014) and Ngai (2004), affects and emotions are conceptualized on a spectrum with emotions as "more heightened, more formalized intensities of perception, whereas affects are less formal, less individuated, and less structured" (Helmsing, 2014, p. 129). By the affective technologies, these affects and emotions work together as a means to establish norms and a sense of division between the self and others. As described by Leonardo and Zembylas (2013): "Affective technologies include the mechanisms through which affects and emotions come to be instrumentalized, containing certain social norms and dynamics of inclusion/exclusion with respect to one's self and an Other" (p. 151). What this means is that in education, pedagogies of affect and emotion that are enacted intentionally or unintentionally "are effective ways of anchoring students and teachers in a particular way of life" (Zembylas, 2021, p. 229). A discursively constructed, idealized sense of evil can be anchored by affects and emotions to a subject's understanding of self and others in education.

In this process of the discursive construction of evil, memory, identity, and emotion/affect are

entangled with each other, and memories especially play a crucial part because they are felt and performed in education in a certain way and cannot be separated from emotions and understandings of who/what evil, we, and others are (Zembylas, 2021). This form of the politics of memory cultivates certain affective and emotional memories and directs how certain events and people are perceived and remembered in education. However, this formulation of evil can represent different trajectories in the construction of evil, resulting in different social outcomes—understanding evil as "the other" or as a more complex phenomenon.

To understand these social outcomes, in this study, we scrutinize the formulation and communication of ideals concerning evil and emotions by interpreting them through two separate concepts, each representing distinct ways of constructing evil, namely villainification and anti-villainification processes. In more detail, in this study, "villainification" is understood as a process of constructing individuals as villains through which we "imagine exceptional individuals divorced from their social context, rather than ordinary people enmeshed in their communities" (van Kessel, 2022, p. 347). This process can happen in narratives, historical accounts, political discourses, and our daily lives, and it often serves to separate evil others from our (supposedly) not-evil selves (van Kessel & Crowley, 2017). In this process, the technologies of affect separate evil from the good that the in-group represents (Zembylas, 2021, p. 223). By labeling someone else as purely good or evil, these people are constructed in a one-sided way, which oversimplifies who they are, what they have done, why they did what they did, and so on. All their complexity is lost, and they become unlike how we understand the average person. In the villainification process, a key categorization is the "villain"—a person or group who/which is held responsible for a more complex evil process (van Kessel, 2022; van Kessel & Crowley, 2017). Identifying a villain can easily have the unintended consequence of neglecting broader culpability.

In contrast to this, anti-villainification as an ethos invites us to consider how evil is perpetuated by ordinary people like ourselves instead of cartoonish evildoers, and in this way, evil is constructed in more complex and nuanced ways. Thus far, anti-villainification strategies have been conceived as using the active voice for verbs and naming those contributing to the evil process, developing ethical questions to consider, discussing human capacities for evil, making villains more relatable, and analyzing resources and situations with students (van Kessel, 2022). In this study, we set out to understand how these villainification and anti-villainification processes are manifested with the construction and promotion of educational ideals concerning evil and emotions in pre-primary education.

### Method

To understand the construction and communication of ideals concerning evil and emotions, we invited two Finnish pre-primary education teachers to ponder the topic of evil. The teachers in question were working together with the children during educational sessions and shared similar views on how pre-primary education should be conducted, as they had been working at the same kindergarten for years. Both had also worked as members of the same team and in pre-primary education for several years, as well as in kindergartens for decades. Thirteen children were involved in this study, aged between 6 and 7 years old, and according to the teachers, they all had homogeneous and stable family backgrounds with highly educated parents.

The teachers and the group of children were selected for this study because during our outreach to different kindergartens, these teachers demonstrated a distinct interest in engaging in the topic of evil and education through discussion and reflection. In this sense, they represented both a purposeful and a convenience sample (see Adler & Clark, 2011), because their reflections on evil were easy for the researchers to obtain, due to the teachers' personal interest and willingness to spend time discussing this topic with us. This study employed a qualitative approach focused on a single case, exploring how teachers formulated and conveyed ideals concerning evil and emotions. By engaging qualitatively with the case study, more specific and in-depth information can be gained from complex phenomena in real-life contexts (Flyvbjerg, 2011). Examining a single case involving only two teachers and a group of children offered us the opportunity to understand in more detail the complex phenomena of the construction and communication

of ideals concerning evil and emotions than if we had examined multiple teachers and child groups with the same resources.

In this study, we did not rely on just one data source; the data were collected in two phases. During the first phase, the first author interviewed the teachers on the topic of evil and education five times during the period from November 10, 2021, to January 20, 2022. The duration of each interview was one hour. When conducted thoughtfully, interviews can be understood as valuable sites for exploring discursive construction, functioning as dynamic spaces in which participants collaboratively shape meaning as well as their beliefs and perceptions of reality (Reiter, 2018). In this study, the interviews were conducted as semi-structured interviews in Finnish. Some of the questions had been formulated beforehand by the researchers, and some questions were created during the actual interviews, based on the topics and perspectives that the research participants brought up (Adams, 2015). In this way, a space for teachers' personal reflections, beliefs, and viewpoints was created to ensure that they could share ideas that were not already expected by the researchers (see Adams, 2015). From this interview data (in Finnish but translated into English), we analyzed the ideals concerning evil and related emotions by detecting the aims the teachers set for education when it came to evil.

After this, in the second phase, the first author video recorded two educational sessions conducted by the teachers that dealt with bullying and stealing, and which the teachers had mentioned in their interviews. The duration of each educational session was approximately one hour, and the sessions took place during March – April 2022. From this data, we analyzed how the teachers further constructed and reinforced their ideals in practice, and by this, how they communicated their educational goals concerning evil and emotions to children. To conduct our research according to good scientific practice and research ethics, prior to conducting the interviews and collecting the video data, we obtained informed consent from the teachers, children, and their guardians for participation. In accordance with the Guidelines for Good Scientific Practice set by the Finnish National Advisory Board on Research Integrity, this meant that we did not need to seek a formal approval from the Research Ethics Committee in the Humanities and Social and Behavioral Sciences at the University of Helsinki to conduct our study. Instead, the research permit and the ethical approval of the study was granted by the Education Division, City of Helsinki by the numbers HEL 2021-000775 and HEL 2020-009695.

The emotions that are normatively constructed within the child group, especially in relation to evil, can be distressing for children. To mitigate any potential harm caused by the research, the researcher carefully considered their ethical responsibilities and was prepared to stop data collection if the situation appeared distressing for the children. Additionally, both children and adults were advised to inform the researcher if they did not wish to be video recorded in certain situations. Furthermore, the researcher only observed the educational sessions within the child group and did not directly introduce the topics of emotions or evil to the children. In this way, the researcher's influence on the sessions and the handling of these topics was kept to a minimum.

The analysis of the interviews and educational sessions was conducted by discourse analysis, utilizing its critical strands to understand the usage of power in the communication of the teachers' ideals concerning evil (Fairclough, 2001). In our analysis, we focused on examining discursive practices, including the representations and meanings embedded in this recurring language use, and considered the broader social implications and effects of the discourse (Fairclough, 2001). With this approach, we analyzed the practices of language use related to formulations of evil and emotions that are sometimes beyond the research participants' and insiders' perceptions, and, for this reason, need to be analyzed by the external researcher (cf. Alexander, 2003). The initial analysis was conducted by the first author, and later, the second author also took part in analyzing the data in more detail. However, during the analysis, the first author led this process to ensure the consistency of the interpretation of the data.

In our analysis of the interviews, we detected various discourses that communicated distinct meanings, illuminating the teachers' beliefs of educational goals. Discourses about manifesting these goals also represented separate ideals that were set for education concerning evil and emotions. These discourses

were as follows: 1) the ideal of implicit education on evil, 2) the ideal of understanding and accepting innate evil in humans, 3) the ideal of reflection on evil and related emotions, and 4) the ideal of distinction between good and evil.

From the video recordings of the educational sessions, we detected and further analyzed discursive practices that reinforced and further constructed these ideals, contributing further to each discourse detected from the interviews. In this study, we understand discursive practices as being recurring language use that mediates meanings, social identities, or subject positions or types of self (Fairclough, 1992, p. 64) that can be understood as installations or effects of power in distinct sociocultural settings (cf. Fairclough, 2001). The relation between the discursive and the non-discursive is dialectical, and therefore the meanings, ideals, and practices that teachers in this study produced were mediated and further constructed through the complex interplay of language and social reality. As we detected different discursive practices, including narrating, appealing, praising, and questioning, we also recognized an affective reality that accompanied these ways of mediating ideals. This entanglement of affect, discourse, and practice has also been recognized in previous research that illuminates that affects accompany discursive practices in the process of mediating meanings (e.g., Wetherell, 2013). In our study, the affective component was evident, as the teachers often did not explicitly state what they aimed for by utilizing their practices, but instead they created a sense and a feeling of the ideals in the child group by instrumentalizing affects and emotions with the discursive practices to reach these goals (cf. Leonardo & Zembylas, 2013). After this notion of affects, we understood that the practices were used in the child group as affective technologies that aimed for reaching the ideals and simultaneously illuminated the teachers' discursive usage of power. Finally, we also detected processes of villainification and anti-villainification from our data by analyzing in-group and out-group boundaries in relation to evil.

In analyzing the data from the interviews and educational sessions, we detected the ideals through their recurring discursive nature, and the same ideals were constantly repeated, akin to data saturation. However, as discourses communicate and construct meanings that change over time and in different situations (Hjelm, 2011), complete saturation of the discourses cannot be obtained. Similar discourses that illuminated the ideals were repeatedly detected by the researchers when analyzing both the interviews and educational sessions, and this indicated consistency in our findings between two separate data sources. In this way, our findings concerning the ideals were supported by two different datasets (cf. Carter et al., 2014).

## Findings

In this section we will present our findings concerning, 1) what educational ideals concerning evil are constructed by teachers during the interviews and 2) how these ideals are communicated and further constructed in relation to emotions during educational sessions. During their discussions on evil and education, the teachers constructed ideals concerning how evil should be faced and dealt with in pre-primary education. Mainly these ideals contributed to an anti-villainification ethos, as they were aiming to promote the understanding of evil as manifesting in all human subjects and not just in villainous others. The ideals were 1) indirect education on evil, 2) understanding and accepting innate evil in humans, 3) reflection on evil and related emotions, and 4) distinction between good and evil. In communities, these moral ideals can be understood to set boundaries for behavior and emotional expression and require commitments from members of the community (Jacobsson & Lindblom, 2016). In this way, the educational ideals that the teachers were committed to were also communicated to children as in-group boundaries for emotions and behavior when it came to evil.

The teacher's commitment to these moral goals was evident, as our findings show that their ideals were also communicated and further constructed with children as they engaged with the discursive practices of narrating, appealing, praising, and questioning during the two educational sessions. These practices were used as affective technologies, because they were instrumentalized in an affectively provoking manner to require certain body routines, memories, and emotions from the children that contributed to the ideals (cf. Zembylas, 2021). In these discursive practices there were not only emotional

but also apparent affective dimensions at play as less formal and structured aspects of interaction that created certain atmospheres that guided children and their emotions in a subtle way (cf. Helmsing, 2014). The teachers used these affective technologies to promote anti-villainification processes that aimed to include evil in the subjectivity of in-group members. However, we also detected a trace of the villainification process, illuminated later in detail. Next, we have highlighted each ideal separately with some data excerpts to demonstrate our findings.

### **The Ideal of Indirect Education on Evil**

Instead of necessarily talking or thinking about it openly and explicitly, the idea of evil in education is something that can be addressed indirectly, as children are often publicly perceived to be innocent and good in the context of “Western” education (Kurenlahti et al., 2025). The teachers criticized this contemporary approach to education and argued that the current early childhood education was overly focused on good and downplayed the existence of evil. In contrast, during the interviews the teachers constructed their own educational ideals concerning evil that they believed should be promoted in pre-primary education, and by these ideals they also set norms and boundaries for in-group understandings of evil and related emotions (cf. Jacobsson & Lindblom, 2016). One such norm was constructed as teachers defined how evil should be ideally addressed with children. Interestingly, even though the teachers believed that the existence of evil was neglected in education, they argued that the word “evil” could not be used to describe a child when talking to children directly. For example, this was stated by teacher H1 when discussing the usage of the word evil:

In no way; I could not think of saying (to a child) that you are evil.

In this way, the affective setting of dealing with evil was also downplayed by this technology that diminished the emotion-provoking load of using the word “evil” in education and in relation to a child.

Instead of using the word “evil” the teachers thought that children should learn about evil indirectly based on the realization of what is good. In this way, the teachers idealized indirect education on evil in pre-primary education that promoted implicit understanding and a sense of evil. This is shown in the next quote from teacher H1:

Well yes indeed, in that you highlight those good things, and in this way, so then that also in some way gives the awareness about that, that this was good and that other thing was evil, even if you don't, in that way, say it out loud (H1).

What teacher H1 is arguing in the quote is that knowledge of evil is best understood by highlighting the good without stating what evil is. This idealizes indirect education on evil as an educational goal.

During educational sessions, this ideal of indirect education on evil was constantly communicated, reinforced, and further constructed in relation to emotions and evil, as the teachers did not use the concept of “evil” with children but instead narrated wrongdoing to children as “doing unpleasant things” or “acting poorly”. According to Zembylas (2021), affective technologies play a role in establishing divisions between the self and others, as well as in shaping a sense of normative order. In this case, the affective technology of discursive avoidance of the word “evil” and the prohibition of strong emotions and affects related to this phenomenon (see van Kessel, 2017) led teachers to separate themselves and other adults from the children. This was achieved by creating an ideal and following a norm that prohibited the use of the emotionally provoking concept of evil when discussing with and about children.

This ideal is further illuminated when we highlight our other findings, as the ideal of indirect education on evil was constantly present in the context of educational sessions. It is notable that, even though the word “evil” was avoided, the processes of villainification (i.e., an other-focused sense of evil) and anti-villainification (i.e., more complex understandings of evil; van Kessel & Edmondson, 2024) were both manifested by the educational ideals that the teachers constructed and communicated to children. Additionally, by the ideal of indirect education on evil, processes of villainification and anti-villainification were conducted implicitly, as evil was hinted at and not discussed directly.

Overall, the neutralization of evil in pre-primary education was an interesting phenomenon, as the

teachers also believed that at the same time education should promote understanding and accepting innate evil in all humans, as we will show next. In this way, what can also count as evil was indirectly communicated to children without the explicit exposure of the concept of evil.

### **The Ideal of Understanding and Accepting Innate Evil in Humans**

The ideal of understanding and accepting innate evil in all humans was constructed by teachers in the discussions and communicated and further constructed in relation to emotions during educational sessions. As the villainification process entails projecting evil onto out-groups that are separated from the good illuminated by the in-group (Zembylas, 2021), the ideal of understanding and accepting innate evil in all humans contributed more to the anti-villainification process, in which evil can be understood as an in-group phenomenon and an aspect of everyone's sense of self (cf. van Kessel, 2022). This ideal was based on teachers' fundamental belief that humans are ultimately both good and evil, and this also created a norm for what it means to be a human in relation to evil. Such belief was repeatedly brought up by the teachers in their discussions. This next line from teacher H2 represents this belief:

In all of us there can be found, like good and evil, that all of us humans have a tendency to many, many kinds of behavior.

By this line, evil is connected to the existence of all humans that are also understood to have tendencies for multiple various kinds of behavior. In addition, this innate evil was extended to evil emotions and feelings, as this statement by teacher H2 shows:

Everyone sometimes experiences those evil feelings.

By this statement, experiencing evil feelings is connected to everyone, and evil is also included in the emotional world of humans. Norms of these kinds, which relate to morality, create boundaries for what can be understood as normal in-group behavior and emotional expression (Jacobsson & Lindblom, 2016).

During the interviews, the teachers also emphasized that these emotions and feelings — and, more broadly, innate evil — ought to be understood and accepted by children. Also, by seeking to promote the understanding and acceptance of innate evil in all humans, the process of anti-villainification was supported by promoting this realization. Evil was believed to be a phenomenon that humans should learn to live with: recognized, understood, and accepted rather than erased completely from education. In this way, the teachers idealized understanding evil and connected evil directly to the learning of the subjects in an educational context. This is captured in the following example from the discussion of the teachers:

1. H1: Even of course, we would want that evil would vanish from the world, but maybe it won't vanish in that way that it gets faded out, mmm. That its existence needs to be understood somewhere, on some level, so.
2. H2: So, in that way, to accept and to learn to live with it, so.
3. H1: Yes.
4. H2: Of course, not by causing suffering but somehow in a way to accept also its, in a way, existence.
5. H1: Yes. And then you can also maybe see that goodness.

This example shows that the teachers idealized the understanding of evil as an educational ideal because it cannot be erased from the world by downplaying it (line 1.). The teachers further idealized the acceptance of evil and connected evil to learning by stating that evil should be learned to live with, and its existence should be accepted, as teacher H2 proclaims (line 2.) and teacher H1 agrees (line 3.). By gaining this acceptance, the teachers also believed that goodness could be possibly seen in the world (line 5.).

During the educational sessions, this ideal of understanding and accepting evil as an innate aspect of humans was communicated to children by the teachers and also further constructed in relation to emotions as the teachers engaged with the discursive practices of narrating wrongdoing, appealing for children to share their wrongdoings, and questioning the lack of wrongdoing in children. In education, such affective technologies can be used to create a sense of evil and define who we and others are, by employing affects and emotions with discourses (Zembylas, 2021). According to our findings, these affective technologies could be interpreted as strategies to incorporate evil into everyone's sense of self and understanding of others in an implicit way. This was conducted according to the ideal of indirect education

on evil, as the teachers narrated acting poorly and unpleasantly to be a part of human existence and dismissed the usage of the emotionally provoking word evil that was used in the discussions during the interviews.

The teachers utilized affective technologies to create a shared sense of evil within everyone's self, instead of projecting evil solely onto out-group members, and hence, the anti-villainification process was further contributed to (cf. van Kessel & Edmondson, 2024; Zembylas, 2021). The discursive practice of narrating wrongdoing was used as a technology in the context of storytelling. Teachers shared their personal experiences of wrongdoing in efforts to build an affectively safe ground and atmosphere for the children to share their own wrong deeds to manifest the innate evil in humans. Also, in general, to create this accepting atmosphere, the wrongdoing was narrated to be a part of everyone's humanity. The next line from teacher H2 highlights how doing poor things was narrated to children as being innate part of all humans. This line was uttered when the teachers used the discursive practice of appealing that aimed to encourage children to share their own memories of wrongdoing:

...we all humans are that kind, that sometimes we do little bit poor things, so that.

By this line the teacher is affectively appealing to the children to share their wrongdoing, as she is narrating to the children that all humans sometimes do poor/evil things, and by this communicates the ideal of understanding and accepting innate evil in all humans. However, this is done in an indirect way by avoiding the usage of the word evil in the narration.

In addition to encouraging children to share their wrongdoings, the teachers narrated their own personal memories of wrongdoings to children as they demonstrated that all humans, also teachers, had committed poor or unpleasant things and by this, communicated the ideal of accepting and understanding innate evil in humans. Referring to Zembylas (2021), what is remembered can be used in education as an affective means to resemble who we and others are. In this case, the teachers used their own memories to narrate educational ideals that determined who the subjects are and what they feel in relation to evil. The teachers also required children to share similar memories as they communicated the ideals to children. In this way, memories that supported the ideals were cultivated by the teachers, and this contributed to a certain way of how children and distinct events were remembered, resulting in wanted perception of things in education (cf. Zembylas, 2021).

This next example illuminates how memory-driven narrating was done by the teacher. In this example, teacher H1 shares with the children her memory of stealing a safety pin from a friend. In the discussions, this same memory was highlighted by the teacher as an example of doing evil in childhood, and she said that she often shares this memory with children in pre-primary education. During an educational session, she narrated the memory of stealing to children as follows:

That Tiina's baby doll had that kind of little golden or golden colored safety pin that she could use to tie up the baby's diaper...And do you know what? I thought that it was so fine that safety pin that I stole that safety pin, and then I went home...

In this narration, the teacher first describes how the safety pin was small and golden and so fine that she stole the safety pin and left home. By narrating this memory of stealing, the teacher demonstrated that she also had committed unpleasant things and by this, she communicated the ideal of acceptance and understanding of evil in all humans by the affective means of narrating a personal memory.

Similarly, this ideal was communicated and further constructed in relation to emotions as the teachers engaged with storytelling that focused on narrating wrongdoing and related desires to steal or bully others to create an accepting atmosphere. For example, teachers narrated a story about stealing an egg from a duck that described the act of stealing and the emotions that accompanied this act:

I noticed that there was a duck's nest in a bed of reeds. In the nest there were seven eggs. Those were appealing and beautiful looking. The mother duck was washing up further away, and she didn't see me. I wanted a beautiful egg for myself. I couldn't resist the temptation; I stole one egg and hid it in my pocket.

In this narration, in the same manner as in the teacher's previous memory, the detection of an object

of desire, a fine egg, is described first, and then the following act of stealing is represented after this. In addition, the act of stealing is narrated to be accompanied by the emotional world of temptation and wanting to steal the egg. In this way, the ideal of acceptance and understanding of evil in all humans is also further constructed in an affective manner to comprehend emotions and feelings such as the desire to steal from others and having temptations.

In addition, the usage of the discursive practices of narrating and appealing to children to share their wrongdoings, as well as the practice of questioning, contributed to communicating the ideal of understanding and accepting innate evil in humans. This practice created a judgmental and pressure-filled atmosphere and was used by the teacher as the children often hesitated to share their own memories of wrongdoing. One participating teacher (H2) noted how she would encourage a group to see evil-doing as more common and ordinary. This lack of showcasing wrongdoing was questioned by the teachers as this next line from teacher H2 shows:

I can't quiii-te believe that here only Miina, well, has done that (something unpleasant).

This line illuminates how the lack of wrongdoing was questioned by the teacher, as she stated that she didn't believe that only Miina, who had just shared her wrongdoing, could be the only one who had committed unpleasant actions in the child group. In this way, the teacher questioned in an affectively pressuring and judging manner the innocence and sole goodness of children and, by this, contributed to the ideal of understanding and accepting innate evil in ordinary humans as opposed to contributing to the process of villainification that creates an understanding that evil is only perpetuated by villains who are unlike ourselves (cf. van Kessel & Crowley, 2017).

### **The Ideal of Reflection on Evil and Related Emotions**

Teachers believed that children should reflect on their own evil actions and emotions to understand these phenomena and to learn what is good. In this way, norms for good and evil and boundaries of in-group and out-group behavior were constructed (cf. Jacobsson & Lindblom, 2016). By this, the processes of villainification and anti-villainification were also reinforced, contributing to the in-group and out-group related sense of good and evil behavior. Teacher H1 idealized reflections concerning evil actions in education as she described the educational purpose of doing evil in education:

When someone does something evil and then we talk about that and think about that, that, was this now a nice act, or what did it feel like for the other and, and, what did it feel like for you and well, yes you probably learn to be good in that way.

This line shows that in relation to the evil actions of a child, the teacher idealized reflections as a proper way to counteract in these situations and these reflections could also lead to learning to be good.

The teachers also idealized reflections on related emotions that, in their opinion, should be reflected relating to real-life situations and experiences. The teachers thought that in this way, emotions could be more profoundly understood as they were connected to the context of everyday life. This opinion is shown by the next example from the interview, as teacher H2 described the purpose of educational sessions like those we analyzed for this study. H2 shared that in another session not observed by the researchers, after initial hesitation, the children shared their memories concerning wrongdoings to others and reflected related emotions:

In some way, a little bit at first, they somehow couldn't obviously in front of the others, like, to say, that they have sometimes behaved, like, poorly against the other, but, that then, when someone has courage, so, then there begun to come up, like, from them knowledge about the matter and also, person, personal experiences, that, that, it is like, always important somehow, maybe, in education about emotions, that they can, like, reflect those, like, situations from their own life and not like: "now I will tell you what that hate is."

In this example, the teacher describes how at first, the children couldn't tell others that they had acted poorly towards others, but after someone was brave enough to describe their poor actions, the other children followed suit by telling personal experiences on the matter. After this, teacher H2 idealized this reflection in relation to emotions by stating that in education that concerns emotions, it is always important that children can reflect on their own life situations instead of a teacher telling them what hate is. Reflections

on evil actions and related emotions were idealized as an educational goal, and this partly contributed to anti-villainification processes, as the sense of evil within everyone's subjectivity was promoted through these idealized reflective actions in practice.

This ideal of reflecting evil and related emotions was communicated and further constructed in relation to emotions during educational sessions. Affects and emotions are often instrumentalized by affective technologies that contribute to adjusting people to certain norms (Leonardo & Zembylas, 2013). Adjusting children to the ideal of reflecting evil and related emotions was done by discursive practices that were functioning as affective technologies by encouraging and cheering children to act according to teachers' normative ideal. These practices were used to create an encouraging atmosphere and were manifested as appealing, which encouraged children to remember, share, and reflect on wrongdoings and emotions, and also as praising, which was done to make children feel good after they had shared and reflected on wrongdoings and emotions. In addition, the teachers used the practice of questioning to guide and induce further reflections on the topic.

Appealing, as a discursive practice, was used by teachers as they were directly asking for the children to remember, share, and reflect on their experiences and emotions by encouraging children with such questions as:

Has anything like that happened to you? (H1)

or

That kind of thing that you have done that you have regretted afterward. Can you remember something like that? (H2).

These questions were used to appeal to the children to share their memories, experiences and emotions for joint reflection with teachers and other children. Also, the practice of praising contributed to this ideal of reflection, as the children who were acting in a good and wanted manner by remembering, sharing, and reflecting on wrongdoings and emotions were cheered and uplifted by the teachers in an utterly affective manner. This practice is illuminated by the line from teacher H2 who is praising a child after remembering, sharing, and reflecting:

You were so honest, and in that way, so bravely told us. These are quite important matters.

By this line, the teacher praises a child for being honest and brave, as she has shared her unpleasant actions and values the content of sharing to be important by stating that these are quite important matters.

In addition to praising and appealing, the teachers also used the practice of questioning to induce and guide these reflections with children and simultaneously constructed this ideal in relation to emotions even further. For example, as teacher H1 asked children what a guilty conscience looks like after you have done unpleasant things, she guided and induced reflections to manifest the right kind of embodiment of guilt by the practice of questioning. This is shown in the next line:

Do you smile then? Hmmh, so then you are quite serious looking and maybe a little bit, that kind of sad and blue looking.

In this example, the teacher uses the practice of questioning to guide and encourage further reflections on guilty conscience as an emotion that does not appear as smiling of the subject but as an embodiment that looks quite serious, a little bit sad and blue. In this way, the right way of embodying guilt was affectively determined by this questioning, as the children who could embody a guilty conscience correctly, when the teachers asked what it looked like, were praised for this right kind of expression similarly, as demonstrated before.

It was evident that the practice of questioning set the norms for the appropriate emotional expression of guilt after wrongdoing. In this way, the emotion of guilt, which, according to Brinkman (2018), is fundamentally constitutive of human subjectivity, was normatively defined by the teachers, and hence, the children were evaluated according to the expression of this emotion during educational sessions. This reflection related formulation of the correct expression of guilt also led to villainification process, as

we will show in the next section by illuminating the ideal of distinction between good and evil.

Notably, in addition to embodying guilt, the emotional expression of the victim of the wrongdoing was also guided through reflection by questioning. This guidance directed the victim to look and feel worried and sad in the reflections. In this way, overall, not just the reflections, but the right kind of reflections about emotions and evil were furthered as an ideal during the educational session. These reflections were guided by the ideal of distinction between good and evil.

### **The Ideal of Distinction between Good and Evil**

Teachers also believed that children should learn to set apart good and evil from each other. In this way the educational ideal of distinction between good and evil was constructed during the interviews. This ideal extended to emotions that, according to teachers, should be identified as good or evil and pursued accordingly. Consequently, norms and boundaries for in-group and out-group behavior and emotional expression were also created (cf. Jacobsson & Lindblom, 2016), reinforced, and further constructed later in practice, resulting in a villainification process. This ideal of the distinction between good and evil emotions is manifested by the next line of teacher H1 that describes the role of evil in education that concerns emotions:

Well, there are those feelings, a little bit like good and evil emotions. Maybe, that you would learn to recognize those then and pursue those good ones.

In this line, the teacher separates distinct good and evil emotions and proclaims that these should be identified, and the good ones are something to aim towards from this basis. In this way, the distinction between good and evil is idealized as it can lead to the pursuit of good emotions.

In addition, teachers believed that evil feelings and emotions were sometimes experienced by everyone, and for this reason, these should be talked about, and education should also give meaning to both sides (good and evil) in humans:

Everyone sometimes experiences also those evil feelings or in a way, like, like, that yes, it is probably important, like, talk and give meaning to both sides of humans (H2).

In this way, constructing the meaning of both good and evil was seen as an educational goal, and this idealized the distinction between good and evil in education. Also, during the interviews, the teachers brought up that they thought that evil could be detected by representations of good, and vice versa, good could be understood by accepting and understanding the presence of evil. Construction of the distinction between good and evil was understood as relational and could be manifested solely by representations of either good or evil.

During the educational sessions, the teachers communicated and further constructed this ideal of distinction in relation to emotions. However, the teachers only gave direct meaning to what is good, and evil was constructed indirectly, because the word "evil" was not used by the teachers. In this way, the ideal of distinction was constructed by the ideal of indirect education on evil, leaving explicit evil undetected. This ideal of distinction that focused on describing what was good, and what was unpleasant or poor behavior, was promoted by the teachers' affectively driven discursive practices that were: 1) narrating good and unpleasant/poor actions, 2) praising children for sharing and reflecting on their experiences in a good manner, and 3) questioning children for sharing and reflecting on their experiences that deviated from good.

The teachers engaged in the practice of narrating as they described to the children what could be considered to be good and what is unpleasant or poor behavior. This narration was done in the context of storytelling, sharing personal memories of wrongdoing, and directly describing the moral nature of emotions and actions to children. The actions and emotions that were narrated directly as unpleasant or poor behavior by the teachers were desires to steal, lie, and bully. Interestingly, during the educational sessions, good was narrated in relation to these unpleasant and poor actions as a way for a subject to act and feel after a wrongdoing. These actions and feelings that were narrated distinctly as good were having a guilty conscience, the desire to say, "I'm sorry", and wanting to make up for unpleasant/poor actions.

The good actions and feelings were affectively reinforced by the teachers who narrated and emphasized them repeatedly as they shared their memories and engaged with storytelling. These good aspects of a subject were also reflected on with the children. The narration of these good actions and feelings is well illuminated by the following example from the educational session as teacher H1 narrated her emotionally backed memory to children, describing how she felt having a guilty conscience and said, "I'm sorry", after stealing a safety pin from a friend:

I started to feel so horrible about that, that I had taken that safety pin and I had not asked for permission, that I was forced to leave to bring that safety pin back to Tiina late in the evening... I said to that Tiina that this is the thing that I took this, your safety pin. I truly said I was sorry about that. That brought to me this horrible feeling when I had taken something that belonged to the other that I was forced to bring it back. I regretted so much about that act; I had a very guilty conscience.

In this example, teacher H1 first tells the children how she started to feel terrible after taking the safety pin without permission, and because of this, she had to return the safety pin late in the evening. After this she tells how she confesses the stealing to a friend and profoundly says, "I'm sorry". In the last sentence of the example, the teacher yet again emphasizes the terrible feeling she had after taking something that belonged to another and how it resulted in wanting to return the safety pin. The teacher also gives meaning to the terrible feeling by saying that she regretted the act of stealing and had a very guilty conscience. This guilty conscience was also narrated in the context of storytelling about the stolen egg; for example,

I stole one egg and hid it in my pocket. In the evening, I started to feel a guilty conscience, and I regretted my action.

In the story this was followed later by the narration of a desire to confess and apologize for stealing. In this way, the ideal of distinction between good and evil was further constructed to comprehend the emotional world of a subject who could do evil but also act and feel in a good (guilt, desire to apologize) or an evil (no guilt, not apologizing) manner after committing poor/unpleasant actions.

This distinction was also communicated and constructed even further by reflections with children. The children who shared the feeling of having a guilty conscience after poor/unpleasant actions were praised and cheered for this way of sharing, as this next example from a reflection on an act of a child who had stolen a paper snowflake from another child shows. Before this example, a child has shared her memory of stealing a paper snowflake from her previous kindergarten, and her teacher asks a question to further the reflection on this wrongdoing:

1. H2: But did it trouble your mind?
2. Child: a little bit
3. H2: But that guilty conscience, that is a great thing in a human. In that way, it is there a little bit blaming you if you do something unpleasant. So, you know that it is then wrong, it is a good thing that it exists.

In this example, the teacher asks the child if taking the snowflake troubled her mind (line 1.) and the child replies that it did a little bit (line 2.). Teacher H2 praises this answer by a child by emphasizing that a guilty conscience is a great thing in a human, because it tells you if you do something unpleasant, and after this the teacher also determines this feeling of a guilty conscience to be good as it tells what is wrong (line 3.). In this way, a guilty conscience is idealized as good—and affectively represented even as the guardian of good, as it can tell if you do something wrong. This implicitly contributed to an affective understanding of evil manifesting as the lack of a guilty conscience as a distinct opposite of good.

This separation from good that constructed evil indirectly was manifested when teachers utilized the discursive practice of questioning that contributed to a pressure-filled atmosphere when children reflected on their memories of wrongdoings in a manner that deviated from good. For example, a child who did not feel a guilty conscience or wanted to lie after a wrongdoing was questioned by the teachers, and guided by this affective and pressuring means to correct their reflections to illuminate good. In this way, by the ideal of indirect education on evil, the lack of a guilty conscience, and a will to lie after wrongdoing, were implicitly referring to evil as opposite of good. The discursive practice of questioning that affectively pointed out implicitly what could be evil and aimed to pressure and guide reflections back

to illuminate good is presented by the next example, as the teachers question a child when he doesn't feel bad after stealing a Lego figure from the previous kindergarten:

1. H1: Did it leave you little bit bad (feeling)
2. Child: No
3. H2: No, it didn't aah.
4. H1: Not at all?
5. H2: What about now when you think about it as a preschooler then?
6. Child: No
7. H2: (speech overlaps with child's line) did the act feel right or wrong to you?
8. H1: Could you still do so?
9. Child: No, I couldn't
10. H1 and H2: (overlapping speech) Yeeess
11. H1: You have learned after all.

In this example, teacher H1 first asks the child, who has just said that he stole a Lego figure from his previous kindergarten, if this act left the child feeling a little bit bad. The child answers "no" (line 2.) and teacher H2 states in a worried tone of voice that: "no it didn't aah" (line 3.). Right after this, teacher H1 questions the child's answer by stating, "not at all?" (line 4.) and by this, starts to point out that the child has deviated from the good embodiment of wrongdoing. Teacher H2 also contributes to this underlining of a deviation as she starts to pressure and guide the child back to the right kind of reflection by asking, "What about now when you think as a preschooler then?" (line 5.) and by this, offers the child the opportunity to correct his reflection from the present point of view. However, the child still answers "no" (line 6.), and so the teacher continues the effort to pressure and guide the child back to the good expression of wrongdoing by questioning, "did the act feel right or wrong to you?" (line 7.). In this instance, teacher H1 joins in to support the effort of H2 and asks a question of the child: "Could you still do so?" (line 8.). The child answers, "no I couldn't" (line 9.) and the teachers sound relieved as they say at the same time approvingly, "Yeeess" (line 10.), and teacher H1 continues this praising by saying, "you have learned after all" (line 11.). In this way, the ideal of the distinction between good and evil was manifested by the teachers as they questioned a child who deviated from the good and guided by pressuring the child back by affective measures to goodness without directly stating that a child's emotional embodiment was incorrect. By this deviance from good, the child also momentarily referred by his actions to what may be understood as out-group evil (not guilt) as opposite to good (guilt) that the in-group represents. The process of villainification can be set in motion as individuals are imagined as exceptional and separate from their social context (van Kessel, 2022). In this way, as in-group wrongdoing required guilt from the subject, the lack of guilt could be interpreted as pointing to the direction of a villainous evil character who was breaking the ideal of what it means to be an evil subject in the manner that the in-group required. What follows is that the process of villainification could also be detected during educational sessions while the teachers promoted their ideals.

## Discussion

In this study, we explored the educational ideals about evil that teachers constructed during the interviews and how these ideals were communicated and further constructed in relation to emotions during educational sessions. According to our findings during the interviews and educational sessions, the teachers constructed educational ideals concerning evil and related emotions. Additionally, in the context of the educational sessions, the teachers communicated these ideals to children by utilizing affective technologies that were manifested as discursive practices of narrating, appealing, praising, and questioning. Overall, the ideals and affective technologies contributed to both anti-villainification processes by formulating an in-group-related sense of evil, and to the villainification processes by constructing a sense of out-group evil (cf. van Kessel, 2022).

Previously, affective technologies that take part in the formulation of evil in education have been explored only in relation to villainification processes (Zembylas, 2021). Our findings add to this and show that affective technologies can be utilized to contribute to both villainification and anti-villainification processes in education. In our study, the utilization of the anti-villainification process was evident as the teachers used affective technologies to promote the inclusion of the sense of evil in everyone's understanding of self, and the subjectivity of in-group members of the community, rather than projecting evil solely onto out-groups and cartoonish evildoers (cf. van Kessel & Crowley, 2017). However, these anti-villainification processes that the children and the teachers engaged in focused solely on individuals' capability to commit evil and be responsible for evil. In this way, the illumination of the societal aspect of culpability, which previous studies concerning the anti-villainification process hold as crucial to understanding the complexities of evil (van Kessel, 2022), was almost entirely neglected. Hence, our findings illuminate that the anti-villainification processes the teachers involved the children in only partly contributed to a more complex understanding of evil by focusing on evil within individual subjects, rather than the interconnectedness of societal and individual factors when it comes to evil.

Also, according to our findings, a trace of the villainification process was manifested by the construction and communication of ideals that created good and evil and in-group and out-group boundaries. This finding adds to the previous understanding of how evil can be formulated by the creation of in-group and out-group boundaries in education, through discourses and related emotions and affects (Zembylas, 2021). Additionally, as villainification has been explored previously only in relation to the education of older students (e.g., van Kessel, 2017), our findings add to this previous knowledge and illuminate how this process can be utilized in the education of young children. Also, the overall findings contribute to the still almost nonexistent empirical research on evil and the education of young children (e.g., Kurenlahti et al., 2025).

According to our findings, through the communication and construction of the ideal of indirect education on evil, the word "evil" was prohibited by the teachers when talking to children. Instead, they used other concepts that were less emotionally provocative. The norm here communicated and constructed for proper behavior and emotional expression (Jacobsson & Lindblom, 2016) was to approach uncomfortable conversations about evil in a less judgmental and less threatening way with children. In this sense, the ideal of indirect education on evil can be interpreted as being constructed according to the understanding that children are different from adults and are still developmentally unable to deal directly with the topic of evil. This distinction separated children from adults as ontologically different and incapable beings when it comes to dealing with evil. This kind of separation is also highlighted by previous, theoretical studies that showed how children are often defined as developmentally lesser than adults when it comes to evil (Murriss, 2016). Also, even though the teachers in our study believed that the phenomenon of evil should be addressed with children, the ideal that forbade the direct usage of the concept contributed to the current Western tendency to avoid the topic of evil in education (Hunter, 2000; van Kessel, 2019). In this way, evil was implicitly constructed during the educational sessions. Our findings contribute to previous understanding of how evil is implicitly constructed in current Western education (Kurenlahti et al., 2025). As our previous study shows how evil is constructed implicitly through early childhood and pre-primary education curricula (Kurenlahti et al., 2025), this study goes beyond that and illuminates how evil is formulated and communicated in the real-life education of young children.

During the educational session, by the affective technologies not just implicit sense of evil, but also the related understanding of emotions and guilty conscience was promoted in the child group, resulting in in-group and out-group boundaries. This finding provides new information about the ways in which the affective technologies are currently utilized in education to guide culturally bound expressions of fundamental, self-defining emotions, such as guilt in the child group. According to Brinkmann (2018), guilt as a foundational emotion is evaluated by its correctness in varied situations, and it is fundamental to the construction of subjectivity and to the sense of who we and others are. In this case, both the lack and expression of guilt after wrongdoing could be interpreted to take part in the construction of children's subjectivity in the in-group and the out-group, and the good and evil boundaries. During the educational

session, sharing memories, reflecting on wrongdoing, and following guilt were employed to promote a specific kind of in-group evil subjectivity. The deviations from this normatively determined subjectivity illuminated the villainification process, where the out-group evil was constructed, especially as a lack of guilt in a child after wrongdoing. In this way, the lack of guilt also illuminated who the child could be if this emotion were nonexistent.

Overall, our study contributes to the current understanding of how evil in a child can be encountered in education (Jenks, 2005; Murriss, 2016). Previous theoretical studies concerning the historical and cultural trajectories of understanding children and evil have suggested that in Western culture, children who are perceived as evil are often understood as needing strict guidance and punishments (Jenks, 2005; Murriss, 2016). Our findings contribute to this view and show that, based on empirical data, that instead of solely adopting external and strict child rearing methods, teachers can use affective technologies to internalize the guilt in children in a way that could be interpreted to foster children's own internal guidance and emotional "punishments" after wrongdoing. In this way, not just external but also internal guidance were fostered and expected from children who were considered as potentially being evil or doing evil. Additionally, teachers employed external guidance to redirect children toward appropriate behavior when they failed to exhibit guilt after wrongdoing, thereby implicitly positioning them as representations of out-group evil. In this way, the potential evil associated with out-groups was swiftly countered with the external guidance of a child. With these findings, our study contributes to the previous understanding of how the "evil child" is encountered in education by illuminating internal and external aspects of guidance that aim to keep evil at bay when educating young children.

### Conclusion

In this article, we have explored how educational ideals about evil and emotions are communicated to children by the teachers of pre-primary education. Overall, our study highlights the current state of so-called Western education that often does not address evil directly but instead deals with it indirectly, leaving children without an understanding of this topic of education. Our findings indicate that this avoidance can contribute to the process of formulating out-group members as evil in an indirect manner, by implicitly separating someone or something from the in-group, and what is believed to be good within educational settings.

We suggest that to prevent villainification and polarization efficiently, policies and practices that promote more direct engagement with the concepts of evil and with both individual and societal culpability are needed in the education of young children. To foster anti-villainification and a deeper understanding of the societal aspects of evil, it is necessary to move away from the current emphasis on individual development and learning in pre-primary education, which the Finnish curriculum also promotes (Havu-Nuutinen & Niikko, 2014). More broadly, the view of the child as being incapable and developmentally inferior to adults should be challenged by respecting children's capacity to discuss and reflect on difficult and emotionally charged topics—such as evil—from the perspective of both individual and societal culpability. In this way, evil can be understood as a complex phenomenon from the start, and children can become more aware of the villainification and anti-villainification processes in which they are involved through education. This awareness, in turn, enables them to reflect more profoundly on evil and its related emotions from their own perspectives and lived experiences.

Our study also illuminates that strict normative boundaries around reflections and the expression of emotions like guilt can set in motion the villainification process during an educational session. Based on this, we suggest that when evil and fundamental emotions, such as guilt, are reflected in education, more open spaces for these discussions are needed to prevent expectations of certain emotional expressions and actions in strictly normative ways. This could potentially prevent the formation of divisive in-group and out-group boundaries and, as a result, hinder the villainification process, also in a child group.

Since this study was conducted by focusing on a singular case, further explorations of the construction of evil and emotions are needed in the future to gain a broader understanding. While our

approach to conducting research offers information that is limited to specific contexts and data sources, it can still provide new insights into the under-researched topic of the construction of evil in real-life contexts, thus offering background knowledge for future research conducted with more extensive datasets. With this notion, we suggest that the construction of evil and related emotions should be scrutinized in the future in more diverse contexts of education and with participants from a range of backgrounds to grasp a more diverse comprehension of the phenomena.

## Declarations

### *Authors' Declarations*

**Acknowledgements:** The authors would like to thank the Early childhood education and care professionals, the children, and the families who participated in the study.

**Authors' contributions:** All authors contributed to the study conception and design. Data collection was performed by Emma Kurenlahti, and the analysis was conducted by Emma Kurenlahti and Cathryn van Kessel. The first draft of the manuscript was written by Emma Kurenlahti and Cathryn van Kessel and all authors commented on previous versions of the manuscript. All authors read and approved of the final manuscript.

**Competing interests:** The authors declare that they have no competing interests.

**Funding:** The design of the study and collection, analysis, and interpretation of data and writing of the manuscript were supported by the Research Council of Finland under Grant [341153]; and Alli Paasikivi Foundation under Grant [grant number not available].

**Ethics approval and consent to participate:** Prior to conducting the interviews, we sought informed consent from teachers, children, and their guardians for participation. In accordance with the Guidelines for Good Scientific Practice set by the Finnish National Advisory Board on Research Integrity, this meant that we did not need to seek a formal approval from the Research Ethics Committee in the Humanities and Social and Behavioral Sciences at the University of Helsinki to conduct our study. Instead, the research permit and the ethical approval of the study was granted by the Education Division, City of Helsinki by the numbers HEL 2021-000775 and HEL 2020-009695.

### *Publisher's Declarations*

**Editorial Acknowledgement:** The editorial process of this article was completed under the editorship of Dr. Mehmet Toran through a double-blind peer review with external reviewers.

**Publisher's Note:** Journal of Childhood, Education & Society remains neutral with regard to jurisdictional claims in published maps and institutional affiliation.

## References

- Adams, W. C. (2015). Conducting semi-structured interviews. In J. S. Wholey, H. P. Hatry, & K. E. Newcomer (Eds.), *Handbook of practical program evaluation* (pp. 492–505). Jossey-Bass. <https://doi.org/10.1002/9781119171386.ch19>
- Adams, E. C. (2024). "Incapable, uninterested, and ineffective"? Locating villainification narratives in financial education. In C. van Kessel, & K. Edmondson (Eds.), *Teaching villainification in social studies: Pedagogies to deepen understanding of social evils* (pp. 29–44). Teachers College Press.
- Adams, E. C., & An, S. (2020). Thinking with theory in a civil rights center. *Social Studies Research and Practice*, 15(2), 167–182. <https://doi.org/10.1108/SSRP-01-2020-0001>
- Adeniji, D., McQueen, M., & van Kessel, C. (2024). Wanda the villain? How *WandaVision* can aid discussions about enslavement and anti-Black racism. In C. van Kessel, & K. Edmondson (Eds.), *Teaching villainification in social studies: Pedagogies to deepen understanding of social evils* (pp. 111–123). Teachers College Press.
- Adler, E., & Clark, R. (2011). *An invitation to social research: How it's done*. Cengage Learning.
- Alexander, J. C. (2003). *The meanings of social life: A cultural sociology*. Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780195160840.001.0001>
- Berger, P. L., & Luckmann, T. (1966). *The social construction of reality: A treatise in the sociology of knowledge*. Anchor Books.
- Brinkmann, S. (2018). The grieving animal: Grief as a foundational emotion. *Theory & Psychology*, 28(2), 193–207. <https://doi.org/10.1177/0959354317747051>
- Carter, N., Bryant-Lukosius, D., DiCenso, A., Blythe, J., & Neville, A. J. (2014). The use of triangulation in qualitative research. *Oncology Nursing Forum*, 41(5), 545–547. <https://doi.org/10.1188/14.ONF.545-547>
- Christ, R. C., Haas, B., & Baruch Stier, O. (2024). Will the real villain please stand up? Holocaust education and its hidden transgressors. In C. van Kessel, & K. Edmondson (Eds.), *Teaching villainification in social studies: Pedagogies to deepen*

- understanding of social evils* (pp. 45–62). Teachers College Press.
- Fairclough, N. (1992). *Discourse and social change*. Polity Press.
- Fairclough, N. (2001). *Language and power* (2nd ed.). Routledge. <https://doi.org/10.4324/9781315838250>
- Flyvbjerg, B. (2011). Case study. In N. K. Denzin, & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (pp. 301–316). Sage.
- Havu-Nuutinen, S., & Niikko, A. (2014). Finnish primary school as a learning environment for six-year-old preschool children. *European Early Childhood Education Research Journal*, 22(5), 621–636. <https://doi.org/10.1080/1350293X.2014.969084>
- Helmsing, M. (2014). Virtuous subjects: A critical analysis of the affective substance of social studies education. *Theory & Research in Social Education*, 42(1), 127–140. <https://doi.org/10.1080/00933104.2013.842530>
- Hjelm, T. (2011). Discourse analysis. In M. Stausberg, & S. Engler (Eds.), *The Routledge handbook of research methods in the study of religion* (pp. 134–151). Routledge.
- Hunter, J. (2000). *The death of character: Moral education in an age without good or evil*. Basic Books.
- Jacobsson, K., & Lindblom, J. (2016). *Animal rights activism*. Amsterdam University Press. <https://doi.org/10.2307/j.ctt1gsmw9c>
- Jenks, C. (2005). *Childhood* (2nd ed.). Routledge.
- Jones, B. (2024). Removing the binaries in history curricula and teacher education: Difficult-ish as an antidote to villainification and its partner, “difficult histories.” In C. van Kessel, & K. Edmondson (Eds.), *Teaching villainification in social studies: Pedagogies to deepen understanding of social evils* (pp. 63–78). Teachers College Press.
- Journell, W. (2020). Vice, on the basis of sex, and the liberal imagination: Villainification and heroification in popular political film. *Educational Studies*, 56(1), 66–82. <https://doi.org/10.1080/00131946.2019.1692021>
- Journell, W. (2024). Heroification, villainification, and political polarization: Implications for thinking politically about U.S. politics. In C. van Kessel, & K. Edmondson (Eds.), *Teaching villainification in social studies: Pedagogies to deepen understanding of social evils* (pp. 13–28). Teachers College Press.
- Kurenlahti, E., Hilppö, J., & Lipponen, L. (2025). Re-thinking curricula and “evil” in teacher education during the sustainability crisis. In H. Harju-Luukkainen, S. Garvis, J. Kangas, J. Marôco, M. Maunula, & M. Maunumäki (Eds.), *Generating sustainable futures through teacher education: Globally rethinking higher education* (pp. 279–293). Springer Nature Singapore. [https://doi.org/10.1007/978-981-96-3329-6\\_17](https://doi.org/10.1007/978-981-96-3329-6_17)
- Leonardo, Z., & Zembylas, M. (2013). Whiteness as technology of affect: Implications for educational praxis. *Equity & Excellence in Education*, 46(1), 150–165. <https://doi.org/10.1080/10665684.2013.750539>
- Murris, K. (2016). *The Posthuman Child: Educational transformation through philosophy with picturebooks*. Routledge. <https://doi.org/10.4324/9781315718002>
- Ngai, S. (2004). *Ugly feelings*. Harvard University Press. <https://doi.org/10.4159/9780674041523>
- Reiter, R. M. (2018). Interviews as sites of ideological work. *Spanish in Context*, 15(1), 54–76. <https://doi.org/10.1075/sic.00003.mar>
- Smits, R. M., & Krutka, D. G. (2024). Can technology be evil? Heroes, villains, and the banality of technology. In C. van Kessel, & K. Edmondson (Eds.), *Teaching villainification in social studies: Pedagogies to deepen understanding of social evils* (pp. 127–144). Teachers College Press.
- van Kessel, C. (2017). A phenomenographic study of youth conceptualizations of evil: Order-words and the politics of evil. *Canadian Journal of Education*, 40(4), 576–602.
- van Kessel, C. (2019). *An education in “evil”: Implications for curriculum, pedagogy, and beyond*. Springer. <https://doi.org/10.1007/978-3-030-16605-2>
- van Kessel, C. (2022). Deindividualizing evil and good in social education. *Social Education*, 86(5), 347–354.
- van Kessel, C., & Crowley, R. M. (2017). Villainification and evil in social studies education. *Theory & Research in Social Education*, 45(4), 427–455. <https://doi.org/10.1080/00933104.2017.1285734>
- van Kessel, C., & Edmondson, K. (2024). Concluding thoughts. In C. van Kessel, & K. Edmondson (Eds.), *Teaching villainification in social studies: Pedagogies to deepen understanding of social evils* (pp. 213–215). Teachers College Press.
- van Kessel, C., & Plots, R. (2019). A textbook study in villainification: The need to renovate our depictions of villains. *One World in Dialogue*, 5(1), 21–31.
- Varga, B. A., & Adams, E. C. (2024). “Hang on, so that thing’s a Loki too?” Mimetic materialities, variants, and villainy. In C. van Kessel, & K. Edmondson (Eds.), *Teaching villainification in social studies: Pedagogies to deepen understanding of social evils* (pp. 95–110). Teachers College Press.
- von Stuckrad, K. (2013). Discursive study of religion: Approaches, definitions, implications. *Method & Theory in the Study of Religion*, 25(1), 5–25. <https://doi.org/10.1163/15700682-12341253>

The discursive constructions of evil and related emotions...

- Wetherell, M. (2013). Affect and discourse—What’s the problem? From affect as excess to affective/discursive practice. *Subjectivity*, 6(4), 349–368. <https://doi.org/10.1057/sub.2013.13>
- Wills, J. S. (2019). “Daniel was racist”: Individualizing racism when teaching about the Civil Rights Movement. *Theory & Research in Social Education*, 47(3), 396–425. <https://doi.org/10.1080/00933104.2019.1583620>
- Zembylas, M. (2014). Rethinking race and racism as technologies of affect: Theorizing the implications for anti-racist politics and practice in education. *Race Ethnicity and Education*, 18(2), 145–162. <https://doi.org/10.1080/13613324.2014.946492>
- Zembylas, M. (2021). Victimization and villainification as affective technologies in the Cyprus conflict: The case of the “I Don’t Forget” education policy. In E. Klerides, & S. Carney (Eds.), *Identities and education: Comparative perspectives in times of crisis* (pp. 223–244). Bloomsbury. <https://doi.org/10.5040/9781350141322.ch-011>

# Between a rock and a hard place: Principals' views on gender issues in teacher recruitment in Indonesian early childhood education

Muchammad Tholchah<sup>1</sup>, Renti Aprisyah<sup>2</sup>

**Abstract:** This study explores how kindergarten principals in Indonesia perceive gender issues in relation to the teacher recruitment process. Employing a qualitative approach, the study involved focus group discussion with four principals and individual interviews with three others, guided by socio-cultural theory. The findings reveal that although all principals recognized the value of male teachers, they faced competing challenges in hiring them. These included beliefs that the profession is more appropriate for women, fears of potential harassment, and concerns about masculine teaching styles. Deeply embedded gender stereotypes and dominant social norms that position men primarily as breadwinners further discouraged principals from hiring male teachers. Consequently, early childhood education environments remain gender-homogeneous, sustaining gender imbalances and inequality. Since this study involved only female principals in West Java, future research should include a more diverse group of participants and broader geographical contexts to better understand male teacher participation in Indonesian early childhood education.

## Article History

Received: 11 April 2025

Accepted: 20 October 2025

## Keywords

Gender issues; Interview; Kindergarten principals; Sociocultural theory; Teacher recruitment

## Introduction

For decades, early childhood education (ECE) has remained one of the most gender-imbalanced fields worldwide (Bittner & Cooney, 2003; Cameron, 2001; McDonald et al., 2024; Rohrmann, 2020; Sullivan et al., 2024; Sumsion, 2005; Thorpe et al., 2020). Women continue to dominate the field, while the number of men occupying the job in this setting relatively low across different contexts (Reich-Shapiro et al., 2020). This pattern is evident in various part of the world, including countries in the Asia-Pacific region, such as Australia (Sullivan et al., 2024, 2020; Sumsion, 2005), China (Xu et al., 2022; Xu & Waniganayake, 2018), and Indonesia (Adriany, 2022; Pangastuti, 2020; Yulindrasari, 2017). However, the issue of gender imbalance in ECE goes beyond statistics since it reinforces traditional gender norms and sustains the belief that caring for and educating young children is inherently a women's roles (Bhana et al., 2022; Warin, 2018).

Increasing male representation in ECE is vital not only for advancing gender equality but also for enriching children's learning experiences (Brody et al., 2021). Male teachers help challenge conventional gender roles, offering children broader role models and perspectives (Organisation for Economic Co-operation and Development [OECD], 2019). They may also bring distinct approaches to teaching, play, and classroom management that complement those of female teachers (Davies, 2023). A more diverse teaching team can better meet different learning needs, improving the overall quality of ECE (Warin, 2018). Accordingly, growing awareness of the value of men in early childhood settings has led to global campaigns promoting the recruitment of male teachers (Reich-Shapiro et al., 2020).

Rohrmann (2020) suggests that in the past decade, several countries such as Norway, Denmark, Belgium, Austria, and China have taken steps to boost male participation in ECE settings. These efforts emphasize the importance of strategic planning, funding, community involvement, and competitive salaries in encouraging men to join the profession.

<sup>1</sup> Nahdlatul Ulama Indonesia University, Faculty of Teacher Training and Educational Sciences, Department of Early Childhood Education, Jakarta, Indonesia, e-mail: [muchammad.tholchah@unusia.ac.id](mailto:muchammad.tholchah@unusia.ac.id) ORCID: <https://orcid.org/0000-0002-2323-2256>

<sup>2</sup> Nahdlatul Ulama Indonesia University, Faculty of Teacher Training and Educational Sciences, Department of Early Childhood Education, Jakarta, Indonesia, e-mail: [renti@unusia.ac.id](mailto:renti@unusia.ac.id) ORCID: <https://orcid.org/0000-0002-6774-8190>

However, recruiting male teachers remains challenging due to a range of interconnected issues. In many contexts, the profession is associated with poor working conditions and low financial rewards, making it less appealing to potential male candidates (Boyd & Newman, 2019; Eckhardt & Egert, 2020). These challenges also include long working hours, lack of support, high turnover, and limited opportunities for professional advancement (Brody et al., 2021; OECD, 2019; Rohrmann et al., 2021). Low salaries compared to other educational sectors further reduce the profession's attractiveness (McDonald et al., 2024).

Societal perceptions also play a significant role in discouraging men from entering the field. Negative stereotypes and cultural stigmas, such as fears of being accused of child abuse or pedophilia (Bhana & Moosa, 2016; Heikkilä & Hellman, 2017; Sak et al., 2019), foster mistrust and suspicion (Brody & Gor Ziv, 2019; Mathwasa & Sibanda, 2021). This environment discourages men from pursuing ECE careers. Moreover, there is a widespread belief that male teachers lack the nurturing qualities needed for early childhood teaching (McDonald et al., 2024). ECE is often viewed as a female-dominated field because it emphasizes emotional care more than intellectual education (Farquhar, 2008; Koch & Farquhar, 2015; Swick & Brown, 1999). Interestingly, neuroscience studies have shown that cognition and emotion are interconnected in learning (Tyng et al., 2017; Van Laere et al., 2014). This highlights emotional care and intellectual development are both essential to a child's growth, making the notion of ECE as purely emotional work outdated (Miskuska & Fairchild, 2020). The integration of emotional and intellectual elements is vital to holistic child development, showing that both men and women can make valuable contributions to the field. The stereotype that caregiving is inherently female is rooted in traditional gender roles, which often portray men as less capable in nurturing roles (Xu, 2021). These views continue to discourage men from entering ECE, despite growing evidence that they can be just as effective in supporting young children (Kaiser & Rasminsky, 2023).

Furthermore, societal views of ECE as a female-dominated field exacerbate the challenges faced by male teachers. The profession is widely perceived as low-status and poorly remunerated, which further discourages men from entering the field (Davies, 2023). Concerns about being seen as inappropriate or suspicious add to these challenges, as male teachers may feel unwelcome in early childhood settings (Sullivan et al., 2024), frequently facing scrutiny and discrimination (Hedlin et al., 2019) or being viewed with suspicion (Pruit, 2015). The absence of male role models reinforces the perception that ECE is not a suitable career path for men (Bhana & Moosa, 2016).

In Indonesia, studies on teacher recruitment in ECE largely focus on localized settings, as shown in studies by Andina and Arifa (2021), Huang et al. (2022), Qomario et al. (2018), Sofiah and Munandar (2023), Surya (2016), Wulandari (2013), and Zidan (2024). These works comprehensively detail recruitment processes and procedures specific to certain regions or institutions but give limited attention to the broader socio-cultural context that shape these practices.

While male participation in ECE has been contested globally, the Indonesian context presents distinct socio-cultural features. Gender roles in Indonesia are shaped by religious, cultural, and community norms that often position caregiving and teaching in ECE as inherently feminine professions (Ramdaeni et al., 2020). These norms contribute to the marginalization of male teachers and reinforce gendered expectations in educational settings. Scholars have emphasized the need to examine how these socio-cultural beliefs influence recruitment and retention practices, particularly in Southeast Asian contexts where Western educational models may not fully align with local values (Adriany et al., 2022). Moreover, broader discussions on gender equity in ECE highlight the importance of understanding how institutional and societal perceptions shape workforce diversity as, W. S. Tan (2017) argues. A socio-cultural lens offers a valuable framework for analyzing how principals' beliefs and practices are embedded within these cultural narratives. Accordingly, this study provides a socio-cultural analysis of male teacher recruitment in Indonesian ECE, examining how gendered perceptions and cultural beliefs inform recruitment decisions and contribute to both barriers and possibilities for male participation.

The recruitment of teachers in Indonesian ECE institutions is shaped by multiple factors that

influence both the selection process and the qualifications sought in prospective teachers. Putri and Karwanto (2021) reveal that hiring qualified and competent teachers is essential for improving the overall quality of education. They argue recruitment should be conducted through a thorough and systematic process to ensure that only the most capable candidates are selected. Other studies also emphasize the need for teacher candidates to hold appropriate qualifications and demonstrate the potential to support children's developmental needs (Andina & Arifa, 2021; Hasibuan et al., 2023; Huang et al., 2022; Kahfi, 2022; Qomario et al., 2018; Shofiah & Munandar, 2023; Simatupang, 2019; Widiarti et al., 2018). These studies refer to the concept of professional teachers as outlined in government regulations (Ministry of Education and Culture, 2014), which require candidates to meet specific qualifications and competencies.

Diana et al. (2023) assert that teachers must comprehend pedagogical strategies which are relevant to the diverse needs of children. Additionally, a candidate's personal traits and the demands of the job, as well as institutional practices, plays a significant role in the recruitment process (Nugroho et al., 2024). Effective teacher recruitment involves not only identifying candidates with the necessary skills but also ensuring their personal characteristics are aligned with the role. Putri and Irawan (2021) underline the importance of a structured recruitment process, which includes selecting qualified candidates and providing ongoing professional development. Such a systematic approach helps ensure that the process is both efficient and effective, ultimately leading to the selection of the most suitable individuals for teaching roles in ECE institutions.

While existing debates and studies have extensively documented the benefits and challenges of male participation in ECE, there remains a critical gap in understanding how socio-cultural contexts shape recruitment practices. The absence of comprehensive, context-specific analysis limits our ability to grasp the complex barriers and enabling conditions that influence male teacher inclusion. Given that perceptions of gender roles and professional suitability are deeply embedded in cultural narratives (Anthias, 2013; Gill, 2020), it is essential to examine these dynamics within localized settings, where interpretations of gender and education may diverge significantly from global norms (Glinski et al., 2018).

Accordingly, this study investigates the following research question: *How do kindergarten principals perceive male teacher recruitment within Indonesia's socio-cultural context, and how are these perceptions reflected in recruitment practices?* By exploring this issue, the study explores the ways in which socio-cultural norms and community expectations inform both the beliefs and practices of school leaders. Moreover, it contributes to a deeper understanding of how cultural context influences decision-making in Indonesian ECE and offers insights into the broader dynamics of gender and workforce diversity in the settings.

### **Early Childhood Education in Indonesia: Contextualizing the Study**

According to the *Law of Education* (Government of Indonesia [GOI], 2003) ECE in Indonesia is defined as a series of planned activities and stimuli provided to children from birth to age six to support their development and facilitate their readiness for primary education level. Unlike primary and secondary education, ECE is non-compulsory and remains optional. Consequently, enrollment depends heavily on parental decisions and socio-economic conditions, leading to varying participation rates across regions (Adriany et al., 2020). Indonesian law also classifies ECE as nonformal education, typically linked to family, community, and socio-religious organizations. Therefore, as W. S. Tan (2017) suggests, families and communities are primarily responsible for providing ECE services and facilities, rather than the government. This non-compulsory status has contributed to disparities in access and quality across socio-economic groups and regions (Yulindrasari, 2012).

Recently, 6,825,425 children are enrolled in various ECE institutions (Ministry of Education, Culture, Research and Technology [MOECRT], 2025) include kindergartens, playgroups, daycare centers, and other units which they are coordinated by the Ministry of Education. Additionally, a certain number of children are enrolled in *Raudhatul Athfal* (Islamic kindergartens) that are managed by the Ministry of Religious Affairs (MORA).

There are 198,482 ECE institutions in Indonesia, with 97% operated by private entities (Ministry of

Education, Culture, Research and Technology, 2025). These centers often compensate for limited public provision, serving diverse community needs (Adriany, 2022; Wijoyo, 2020). Kindergartens under MORA are entirely privately operated. This situation has led to sharp inequalities between urban and rural areas. Urban institutions tend to have better infrastructure and resources, while rural areas face limited access and lower service quality (The World Bank, 2013). For instance, MOECRT (2025) reported that 3,848 ECE institutions have no electricity access, highlighting the urgency of addressing resource disparities (Adriany, 2022; Formen, 2018).

In terms of teacher qualifications, a bachelor's degree in early childhood studies or psychology is the minimum requirement for teaching in an ECE setting in Indonesia (GOI, 2014). However, the data shows that a significant number of teachers do not meet this standard. Around 337,200 out of 710,383 ECE teachers (approximately 52.5%) hold qualifications below the bachelor's degree level (MOECRT, 2025). This gap is more evident in rural areas, where access to higher education is limited, financial resources are scarce, and professional development opportunities are lacking (Formen, 2018; Pangastuti, 2020). Consequently, many institutions rely on volunteer teachers with minimal or no formal training (Jung & Hasan, 2014).

Based on employment status, ECE teachers in Indonesia are classified into five categories: civil servants (CS), government employees with work agreements (GEWA), private teachers, auxiliary teachers paid by local governments (ATLG), and part-time teachers. Of the current total of 710,383 teachers, 36,478 are civil servants, 6,773 are GEWA, 445,382 are private teachers, 19,624 are ATLG, and 202,126 are part-time teachers. Among them, only 38,791 are men, accounting for about 5.5% of the total (MOECRT, 2025).

Teachers in private ECE institutions, particularly in urban areas, generally benefit from better facilities, higher salaries, and access to professional development programs. However, they also face greater pressure and heavier workloads (Pranoto et al., 2021; The World Bank, 2013). Urban ECE institutions can attract highly qualified teachers by offering competitive salaries and structured professional development, advantages that are often unavailable in rural areas (Beaty et al., 2018). This urban-rural divide deepens educational inequality, as teachers in underserved regions lack the support and resources needed to improve quality (Nakajima et al., 2021).

Education in Indonesia is a shared responsibility between the government and the community (GOI, 2003). While the government provides policy and standards, the management of ECE centers, particularly private ones, is largely autonomous (The World Bank, 2013; Yulindrasari, 2012). This autonomy allows flexibility and innovation but also presents challenges in maintaining consistent quality and adherence to national standards (Formen, 2018; Kahfi, 2022; W. S. Tan, 2017). Stronger collaboration and support mechanisms between the government and private providers are therefore needed to reduce disparities and improve the overall quality of ECE in Indonesia (Bangay, 2015; Nasution, 2017; Simatupang, 2019).

## Method

### Research Design

This study employs a qualitative approach to examine kindergarten principals' perception of gender and teacher recruitment practices. Qualitative research is particularly suitable for this purpose due to its exploratory and interpretative nature, which enables an in-depth understanding of individuals' experiences and viewpoints (Ary et al., 2019; Creswell, 2009; Creswell & Guetterman, 2019). This approach aligns with the study's objective of capturing the complex views of kindergarten principals on gender dynamics and teacher recruitment within the Indonesian ECE context. By utilizing qualitative methods, the study aims to explore deeply the perceptions held by these educational leaders, providing rich, detailed insights that quantitative methods might not capture (Cohen et al., 2018).

### Participant (Sampling Process)

Researchers used purposive sampling to intentionally select participants with specific characteristics relevant to the research question. This method ensures the sample includes individuals who can provide rich, detailed insights into the phenomenon being studied (Creswell & Poth, 2018). In this study,

participants were required to be principals of ECE institution, ensuring they have relevant experience and insights into teacher recruitment and gender perception within early childhood education.

To recruit participants, the researchers enlisted support from students in the Early Childhood Department within their faculty. Practically, the researchers distributed a flyer through a WhatsApp group comprising these students. Many of these students hold teaching assistant positions in ECE institutions and are members of teacher associations. The researchers encouraged them to share the invitation with kindergarten principals in their networks, particularly in Bogor, West Java.

The flyer included the contact details of the research team coordinator, providing both a phone number and email address for inquiries. This approach ensured that participation was entirely voluntary, as interested principals-initiated contact with the researchers. After one month, eleven kindergarten principals expressed interest in participating in the study.

Subsequently, the researchers sent these principals a brief research plan and a consent form, written both in English and Indonesian, to ensure they fully understood the study and were aware of their right to participate or withdraw at any time without providing a reason. Following the review of these materials, one principal chose to withdraw from the study, resulting in a pool of ten prospective participants. The researchers then coordinated with the remaining participants to schedule data collection at times and locations convenient for them. However, three participants later canceled due to personal reasons.

The study involved seven kindergarten principals, all of whom were female. The participants comprised principals of private kindergartens, aged between 26 and 34 years. Their length of service as principals ranged from 4 to 7 years. All participants had substantial experience in teacher recruitment within their institutions, often serving as the primary decision-makers alongside school owners. This approach is typical in private kindergartens in Indonesia, where the decision-making process, including teacher recruitment, is jointly handled by the school owners and principals, and sometimes involves the school committee as parents' representatives. Accordingly, the insights and perceptions shared by these principals were based on their direct experiences, making their contributions highly relevant and significant to the study's focus on gender perceptions and teacher recruitment.

### **Data Collection Procedures**

In this empirical study, data was collected using individual interviews and Focus Group Discussion (FGD). Participants were given the flexibility to choose between FGD and individual interviews, as well as to propose alternative times and locations for data collection if the options provided were not suitable. Eventually, those who chose FGD agreed to hold the sessions in a classroom at the researchers' university, selected for its convenience and proximity to the participants' homes. The classroom was arranged to support open discussion, with seating in a circle to encourage interaction. Author 1 served as the moderator, using a semi-structured guide to facilitate conversation and ensure balanced participation. All sessions were audio-recorded with participants' consent. In the end, four principals, i.e. Anisah, Bunga, Chandra, and Dini, participated in the FGD for about 98 minutes. This method enabled the collection of rich, diverse data through interactive group dynamics, where participants could build on each other's ideas, leading to deeper insights (Gibbs, 2012).

Additionally, three other principals, namely Euis, Fatima, and Galuh, chose to be interviewed at their respective kindergartens, scheduled after school hours based on their preferences. Author 2 organized each interview which lasted between 45 and 55 minutes and followed a semi-structured format.

To ensure participants could freely express their opinions without linguistic barriers, both the FGD and interviews were conducted in participants' native language, *Bahasa Indonesia*. Shabina et al. (2024) emphasize that this approach facilitates comfortable and precise communication, minimizing the risk of misinterpretation. It also respects the cultural context, acknowledging the role of language in shaping perceptions and interactions. By conducting discussions in Bahasa Indonesia, the researchers ensured the

data collected was authentic and reflective of the participants' true perspectives, enhancing the study's validity and reliability.

### **Data Analysis Process**

The collected data were subjected to a rigorous and systematic analysis. Recordings were transcribed verbatim to ensure accuracy and facilitate detailed examination. Prior to analysis, the transcripts were sent to participants for verification to ensure that the researchers accurately captured their intended meanings and did not misrepresent their statements.

Utilizing ATLAS.ti software, researchers engaged in a comprehensive coding process, which included creating specific codes, writing memos, identifying quotations, annotating data, and observing patterns in the translated transcripts. This systematic approach facilitated the organization of the transcripts, enabling the identification of emerging patterns and recurring themes, which guided the interpretation of the data (Flick, 2014; Naeem et al., 2023).

To analyze the principals' perceptions of teacher recruitment, researchers applied Vygotsky's Socio-Cultural theory, which emphasizes the role of societal norms and cultural contexts in shaping individual assumptions and cognition (Vygotsky, 1978; Vygotsky et al., 2012). From this theoretical lens, principals' decisions regarding teacher recruitment are not made in isolation but are shaped by the socio-cultural and institutional contexts in which they operate. Socio-cultural influences may include community expectations around gender roles, religious norms, and cultural perceptions of early childhood education.

Moreover, the socio-cultural theory suggests that principals' expectations of teachers are shaped by their interactions with various stakeholders, such as parents, community leaders, and educational authorities. These interactions help principals form a comprehensive view of the qualities and skills necessary for teachers to succeed in their specific socio-cultural context. By considering these socio-cultural aspects, principals can make informed and culturally sensitive decisions in recruiting teachers, ultimately contributing to a more effective and contextually relevant early childhood education system in Indonesia.

In addition, within this theoretical framework, language plays a critical role in shaping thought and reasoning. Vygotsky argued that language serves not only as a communication tool but also as a means for thinking, acting, and problem-solving (Rieber & Carton, 1988). Through social interaction, individuals internalize language, which becomes part of their cognitive function, enabling self-regulation and higher-order thinking. Social norms and cultural values embedded in language also shape how individuals perceive and interact with the world, showing the dynamic link between culture and human cognition.

While gender theories focusing on masculinity and femininity offer valuable insights, Vygotsky's socio-cultural theory provides a broader framework for understanding how gender perceptions are constructed through social interaction and language. This approach enables us to examine not only the content of these perceptions but also the processes by which they are formed and sustained within the socio-cultural context of ECE settings in Indonesia.

### **Research Ethics**

Upon expressing interest in the study, author 2 distributed a consent form detailing the procedures, including the use of audio recordings for comfort and the use of pseudonyms such as Anisah, Bunga, Chandra, Dini, Euis, Fatima, and Galuh, to protect their privacy. This anonymization adheres to ethical guidelines, ensuring participants' rights and dignity (Saunders et al., 2015; Vainio, 2013).

Ethical standards were rigorously upheld throughout the study including the implementation of informed consent procedures, assurance of voluntary participation, and strict protection of participant confidentiality.

Another crucial aspect of the present study was that the researchers and all participants did not know each other, indicating the absence of any prior acquaintance. This lack of familiarity significantly reduced potential power dynamics, fostering an unbiased and respectful environment. By ensuring that

researchers and participants had no previous interactions, the study minimized any influence the researchers might have had, allowing participants to express their opinions freely and without pressure (Anyan, 2013).

## Results

Five key themes emerged from the FGD and individual interviews, illustrating the socio-cultural dynamics influencing male teacher recruitment in Indonesian ECE. Themes concerning the perceived suitability of women for teaching roles and concerns about potential harassment were predominantly identified in FGD, reflecting community-level sensitivities. In contrast, interviews highlighted the relevance of male teachers for gender-specific tasks and broader institutional expectations. One theme, i.e. the expected roles of male teachers, was consistently present across both FGD and interviews, suggesting a shared understanding among participants. Each theme is detailed in the following sections to provide a deeper understanding of the socio-cultural situation influencing teacher recruitment in Indonesian ECE settings.

### Women Are More Suitable for Tasks in ECE

Participants shared the view that women possess qualities considered more appropriate for teaching in early childhood settings. Anisa described a commonly held belief in her community regarding women's suitability for the role:

It is commonly believed in my neighborhood that teaching in kindergarten is a job best done by women. They're usually seen as patient and more caring looking after kids. (Anisa)

Similarly, Bunga and Chandra expressed a preference for hiring female applicants over male counterparts:

Honestly, we prefer female teachers because they have mothering attributes. So, they know kids' stuff and how to treat children well. We're open to males teaching at the kindergarten if they meet the schools' established criteria. However, if we must pick one out of two candidates, I'd go for the female teacher. (Bunga)

Well... like my friend mentioned earlier, women are usually more patient with kids. Men might have that too, but we generally prefer women. Unless for positions like extra-curricular tutor, cleaning person or gardener, it's totally fine males are recruited. So, in our kindergarten, we choose females for teaching position. (Chandra)

The above narratives suggest that women are perceived as having qualities such as patience, care, and nurturing, which are seen as essential for early childhood teaching. Consequently, when selecting candidates, principals tend to prefer female applicants for teaching positions.

### The Importance of Male Teachers in ECE

When asked about the participation of males in ECE settings, some participants acknowledged that male are needed, both as role models and in supporting the teaching and learning process. As Fatimah noted:

We knew that our kindergarten needs male figures—such as to be role models for boys, to lead Friday prayer simulations, or whatever. We've just realized that they are needed. (Fatimah)

Galuh also underlined the importance of male presence in helping children understand gender concepts:

I thought children need a real-life example of male teachers in the classroom... hmmm..., our curriculum has a theme about 'self.' It talks about us as human: there is woman or girl, there is a man or boy. If a male teacher attends, it's easier to explain that concept to children in a more concrete way. (Galuh)

Unlike the previous two participants, Euis emphasized the practical contributions that male teachers could make in terms of handling physically demanding tasks:

Our kindergarten has a lot of activities; we often need to lift and carry equipment. Sometimes the teachers are overwhelmed—we are all women. We often imagine having a male teacher. It seems like there's a lot they could do, not just in the classroom, but outside too, especially during such activities. So, yeah... we need males. (Euis)

The data from interviews and FGD reveal a perceived need for male teachers in ECE settings. Participants recognized that male teachers could serve as role models for boys and lead specific activities, such as religious simulations. They also pointed out that male presence can help children better understand gender-related topics in the curriculum. Additionally, male teachers are seen as helpful in managing physically demanding tasks, easing the workload of female staff. Overall, their presence is perceived as enhancing both the educational and operational dimensions of ECE environments.

### **The Expected Role of Males**

Another issue that emerged during the FGD was the expected role of males, particularly within the family context. One participant shared:

We all know the salary is pretty small. The pay isn't great. I can't even imagine a male candidate in an interview bargaining, "Can I get this much salary per month?" and then they may be surprised when I mention the salary they would receive, especially if they have families to support. They are expected to be breadwinners, aren't they? (Galuh)

Dini also raised concerns about the possibility of higher salary demands from married male applicants:

Our school's finances solely depend on the BOP funds, which is small. We're worried that male teachers might ask for high salaries, especially if they are married. They must support their family. So yeah... that's how it is... we're hesitant to hire male teachers, money is the issue. (Dini)

These reflections highlight the financial challenges commonly faced by kindergarten teachers, with salaries often being modest. This becomes more significant for male candidates, who are traditionally expected to serve as primary breadwinners. During interviews, male applicants may inquire about salaries that do not meet their financial responsibilities, leading to concerns about their ability to support a family.

This situation highlights the broader issue of low compensation in the ECE sector, which may discourage qualified individuals, particularly males, from entering the profession. The societal expectation for men to provide financially adds another layer of complexity to their decision to pursue teaching in kindergartens. Inadequate pay not only places financial strain on male teachers but also impacts efforts to improve gender diversity within the ECE workforce.

### **Fear of Potential Harassment by Males**

Another issue that emerged in the discussion about male participation in ECE relates to concerns about male behavior in educational settings, particularly in reference to a widely publicized incident that occurred several years ago. One participant shared:

Dini: I agree that kindergarten needs male teachers. But honestly, we're a bit worried about potential incidents, like the one that got a lot of media attention a few years ago involving sexual harassment towards kids at school. If such a thing happened, it could have serious consequences for us.

Researcher: What consequences?

Dini: Hmm... parents were worried it might happen in our institution, then they decided not to send their children to our school.

Researcher: But it happened in another institution, right?

Dini: Yes. But if we have male teachers, parents may be worried that the same thing could happen to us. Then they may avoid kindergartens that have male teachers.

The principal's hesitation to hire male teachers appears to stem from fears of potential harassment, even though the referenced incident involved a male janitor, not a teacher, at an international school. The case received significant media attention and heightened public concern. In response, many parents became increasingly cautious about male presence in educational settings. This has led to a lingering suspicion and stigma toward male teachers, reinforcing gender-based barriers in teacher recruitment.

### **Pedagogical Method by Males**

One participant, Euis, shared her views on the assumption that male teachers have a distinct way of managing children:

Euis: We used to talk with parents about the possibility of having a male teacher in our kindergarten. Almost all of them were worried about that.

Researcher: what do you mean by worried?

Euis: Hmm... to me, it meant they disagreed with the idea.

Researcher: why?

Euis: Some people think men often use physical ways to discipline kids—like hitting, kicking, or yelling loudly—which can easily scare them. I'm not saying all men do this, but I've seen it happen often in daily life, in our neighborhood.

Researcher: Really? You said not all men. What if it was someone you knew well—say, your neighbor—who is kind and meets all the criteria. Would you hire him?

Euis: Hmm... how should I say this... hmm... (*The participant paused, looked confused, then smiled*) I'm not sure. But we take the parents' side.

Euis's account reveals ongoing concerns among parents about hiring male teachers in ECE settings. The primary fear is that male teachers may use more physical or intimidating disciplinary methods, such as hitting or yelling. Although this stereotype does not apply to all men, it appears frequently enough in community discourse to influence parental perceptions and school hiring decisions.

Euis acknowledges that she is not generalizing all men but points out that such behavior has been observed in her community, which may reinforce these assumptions. When presented with a hypothetical situation involving a trusted male neighbor, she remained hesitant. This hesitation suggests that even familiarity and trust may not be enough to counter broader community concerns.

Her response also emphasizes that schools tend to prioritize parental preferences in recruitment decisions. This reflects the significant influence of societal perceptions on hiring practices in ECE. The situation indicates the need for broader efforts to challenge stereotypes surrounding male pedagogical approaches. Building trust and showcasing positive examples of male teachers who can offer nurturing, non-intimidating learning environments is crucial for changing public perceptions.

## Discussion

This study highlights the complexity of teacher recruitment in Indonesian ECE, particularly regarding the gender of prospective teachers. Recruitment decisions are shaped by multiple factors beyond standard qualifications or planned criteria. As presented above, five key themes emerged from the data. These were analyzed through a socio-cultural lens, resulting in two overarching concepts: gender stereotypes and the breadwinner role as a cultural tool.

### Embedded Gender Stereotypes

The findings provide a detailed view of how gender stereotypes manifest in Indonesian ECE. Gender stereotypes, that defined as generalized and often inaccurate beliefs about traits, behaviors, and roles assigned to individuals based on gender (Koenig, 2018), are deeply embedded in this context. These stereotypes appear in various ways, including beliefs that women are better suited for teaching young children, concerns about male teachers as potential threats, and the notion of a "masculine pedagogy" (Budde & Rieske, 2023; Lazaridou, 2024; Martino, 2008).

On the one hand, the perceived need for male teachers is driven by the idea that certain genders are naturally better suited for specific roles. For instance, it is believed that children need gender-matched role models, like female teachers for girls and male teachers for boys, to support identity formation (Marsh et al., 2008; Olson et al., 2022; Olsson & Martiny, 2018; Solomon, 2016). Male teachers are also seen as more capable of managing physical tasks such as lifting and carrying equipment, reflecting the stereotype that physical strength is a masculine trait (Hindle et al., 2019; Koenig, 2018). These views are rooted in traditional gender norms about physical labor (Mills et al., 2008) and emphasize the role of gender representation in shaping children's understanding of self and society (Marsh et al., 2008). Men are culturally perceived as more capable in such roles than women (Yulindrasari, 2017), reflecting enduring

biases. These gendered stereotypes are often used to justify the inclusion, or exclusion, of male teachers in early childhood education settings.

However, the recruitment of male teachers is also constrained by persistent gender stereotypes. The belief that women are inherently more patient, caring, and nurturing toward young children, making them naturally better suited to early childhood teaching, continues to influence recruitment decisions (Cushman, 2007; Farquhar, 2008; Sumsion, 2000, 2005). As reflected in the narratives of Anisa, Bunga, and Chandra, there is a strong belief within the community that ECE is best handled by women. This perception reinforces the broader global assumption that early childhood education is traditionally women's work (Andrew, 2016; Koch & Farquhar, 2015; Murray, 1996; Sczesny et al., 2022).

Another significant barrier identified by participants is the fear that male teachers might engage in inappropriate behavior, particularly harassment. This concern is echoed in academic literature, where the issue of male teachers and sexual misconduct has been widely discussed by Aguilar & Baek (2020), Zara et al. (2024), Heikkilä & Hellman (2017), Moosa & Bhana (2016), Brody (2015), Eidevald et al. (2018), Sak et al. (2019) and Sullivan et al. (2020).

Global studies further reveal that men in ECE are often viewed as vulnerable to suspicion and allegations of misconduct, especially involving harassment or pedophilic behavior (Brody & Gor Ziv, 2019; Haines et al., 2024; Jhuremalani et al., 2023; Mathwasa & Sibanda, 2021; Sullivan et al., 2020). While these studies do not claim that men are universally excluded from recruitment for this reason, they suggest that such fears significantly impact hiring decisions.

Therefore, discussions in literature emphasize the importance of creating both safe and inclusive learning environments. Bonnett and Wade (2023) argue that addressing these concerns is essential for promoting diversity and equity in education. This study reinforces that view, calling for a balanced approach—one that acknowledges safety concerns while actively working to challenge stereotypes and encourage greater gender diversity in ECE.

This dynamic has inadvertently created a stigma that disadvantages male teachers, who are often perceived as more likely to commit sexual harassment. Such perceptions are rooted in deeply ingrained gender stereotypes and societal biases that unfairly associate men with aggressive or inappropriate behavior. Consequently, male teachers face increased scrutiny and suspicion, which can discourage their recruitment and participation in ECE.

In contrast, the potential for female teachers to commit similar acts is often overlooked or downplayed. This double standard assumes that women are inherently nurturing and less likely to engage in misconduct. Consequently, female teachers are not subjected to the same level of scrutiny, leading to unequal risk assessments based on gender.

These perceptions not only perpetuate harmful gender stereotypes but also contribute to the persistent gender imbalance in ECE. They reinforce the notion that caring for young children is primarily a woman's responsibility, limiting the diversity and valuable perspectives that male teachers can offer. Addressing these biases is essential for building a more equitable and inclusive early childhood education environment.

Another stereotype that hinders the recruitment of males in this study is the belief in stereotypical male traits—particularly the concern that male teachers may use physical disciplinary methods. This relates to the concept of "masculine pedagogy" (Warin & Adriany, 2017), which refers to the perception that male teachers tend to adopt physical approaches, especially in disciplining approach to children. In some parts of Indonesia, a prevailing cultural belief links discipline with physical actions such as slapping or hitting children (Wulandari & Abdullah, 2024; Zulfa et al., 2024). Societal expectations of masculinity often pressure male teachers to adopt more authoritarian and physical methods of discipline (McDowell, 2023; Skelton, 2003). These expectations stem from broader gender stereotypes that associate masculinity with authority and physical strength (Sargent, 2005; Yulindrasari, 2017).

This study shows how societal gender norms and expectations, including gendered framing in ECE (McDonald et al., 2024; Okeke & Nyanhoto, 2021; Sczesny et al., 2022; Xu & Waniganayake, 2018), as well as fear (Peeters et al., 2015; Rentzou, 2011), stigma (Mathwasa & Sibanda, 2021; Sczesny et al., 2022; Wohlgemuth, 2015), and bias (McDonald et al., 2024; Rohrmann, 2020; Sczesny et al., 2022), influence principals' hiring decisions. Together, these factors create a recruitment environment in which male candidates are often disadvantaged, contributing to their continued underrepresentation.

### **Breadwinner as a Cultural Tool**

Some participants referred to the specific role of males within family and societal contexts as that of a breadwinner. In this study, the label "breadwinner" functions as a cultural tool that not only defines gender roles but also influences employment practices, as reflected in the participants' narratives and decisions. Vygotsky (1978) argues that cultural tools, such as language and societal norms, mediate cognitive processes and shape human behavior. Language is not merely a form of communication but a key instrument for thinking, learning, and understanding. Within this framework, the term "breadwinner" emerges as a powerful cultural tool.

The breadwinner label, commonly associated with men, is shaped more by social and community expectations than by educational contexts (Saxonberg, 2024). However, in this study, the belief held by principals significantly influences recruitment decisions in early childhood education. Principals may hesitate to hire male teachers due to the assumption that, as breadwinners, men require higher salaries than kindergartens can provide. This belief is rooted in the cultural expectation that men must earn enough to support their families, making low-paying teaching positions seem unsuitable. This perception reflects not just economic concerns, as McDonald et al. (2024) suggest, but is also deeply tied to cultural norms.

Jurczyk et al. (2019) show how traditional gender roles and the male breadwinner model are embedded in societal norms, shaping employment practices and family life in Germany. Similarly, Kowalewska and Vitali (2024) discuss the well-being penalty for women in breadwinner roles and the cultural and psychological pressures men face when deviating from traditional norms. These studies illustrate the broader impact of the breadwinner label on employment decisions and gender expectations.

The concept of the breadwinner is commonly used in literature to describe the financial dynamics between male and female partners, specifically referring to the individual who contributes the most income to the household through paid labor (Warren, 2007). This label reflects societal expectations that men should pursue high-earning careers to fulfill their role as primary providers (Davis, 2012). The breadwinner model is deeply embedded in many cultures, reinforcing traditional gender roles and shaping employment practices. Mbah (2023), Trappe et al. (2015), and Warren (2007) highlight the enduring influence of this concept across societies, with varying emphasis on whether the breadwinner is male or female.

In Indonesia, the belief that husbands should be the primary breadwinners is strongly rooted in cultural norms, which expect men to be the main earners for their families (Rinaldo, 2019; Sigiroti, 2013). Although there has been a gradual shift, especially in urban areas where women increasingly contribute to household income (Fadilah, 2018), traditional expectations remain dominant.

This role is closely tied to the cultural concept of "*bapakisme*," which emphasizes the father's authority and responsibility within the family (Connell, 2020). Derived from the Javanese word *bapak* (father), *bapakisme* reflects a patriarchal system in which the father is viewed as the head of the household and the primary decision-maker in both domestic and public life. This system is shaped by patriarchal values that position men as authoritative figures in family and society (Kartika, 2015).

Furthermore, *bapakisme* is closely connected to patriarchal structures in Indonesian society (Robinson, 2013; Smith et al., 2014). Patriarchal authority is central to *bapakisme*, extending the father's dominance beyond the home into formal and informal institutions. In these spaces, the male figure is expected to be the most knowledgeable and respected (Aryasatya et al., 2025). This hierarchical model reinforces the expectation of obedience and affirms the father's role as the final authority in decision-making.

Economic responsibility is a key aspect of *bapakisme*, with husbands traditionally expected to serve as the primary breadwinners, providing financial support and stability for their families (Gunawan & Krisnatuti, 2022; Lazuardi & Puspitawati, 2022). The belief that men, particularly husbands, are expected to earn a substantial income as family providers influences both community expectations and institutional practices.

This cultural norm affects not only individual behavior but also organizational decision-making. For instance, principals and educational leaders may hesitate to hire male teachers due to the perception that men, as breadwinners, require higher salaries than kindergartens can offer. The assumption that men must earn enough to support their families renders lower-paying teaching positions less appropriate, thereby discouraging their recruitment.

### **Conclusion, Limitations, and Suggestion for Further Research**

This study investigated kindergarten principals' perceptions and practices regarding teacher recruitment in Indonesian ECE through a socio-cultural lens. The findings reveal that gender stereotypes, that deeply embedded in the cognition of principals, significantly influence their recruitment decisions. While these stereotypes may, in some cases, support the idea of hiring male teachers, they also sustain stigmas and fears about male behavior. This paradox caused principals face competing socio-cultural and institutional pressure that lead them to avoid recruiting male teachers. Furthermore, societal norms that position men as primary breadwinners further shape recruitment practices in ECE. These norms contribute to the continued exclusion of male teachers, reinforcing the perception that teaching young children is predominantly a woman's role. This not only prolongs gender imbalance in the workforce but also limits the diversity of perspectives and skills available in early learning environments.

This study is limited by its focus on female participants and its geographic scope, which was confined to Bogor, West Java. These factors may not reflect the broader experiences across Indonesia. Future research should expand to include diverse regions and incorporate perspectives from various genders and decision-makers involved in teacher recruitment. Such efforts would offer a more comprehensive understanding of recruitment practices in Indonesian ECE institutions.

### **Declarations**

#### *Authors' Declarations*

**Acknowledgements:** The authors would like to sincerely thank the research assistants for their support and commitment throughout the study, especially in providing technical support during the FGD and participant interviews.

**Authors' contributions:** Author 1 played a pivotal role in constructing the research plan, conducting FGD with four principals, preparing questions, and moderating discussions. Author 2 reviewed the structure of the research plan, scheduled and conducted individual interviews with three principals, and prepared interview guides. In terms of data analysis, Author 1 analyzed the collected data and identified emerging themes, while Author 2 contributed by analyzing key concepts. For the literature review, Author 1 identified relevant studies and theories, and Author 2 provided additional Indonesian literature and sources. Regarding journal selection, Author 2 suggested several relevant journals based on their scope and profile, and Author 1 adhered to the guidelines provided by these journals. During manuscript drafting, Author 1 composed the initial draft, and Author 2 offered critical reviews and feedback. In the proofreading process, Author 1 communicated with the proofreader to ensure clarity, coherence, and accuracy, while Author 2 identified and recommended potential proofreaders with reasonable fees. For manuscript submission, Author 1 prepared and submitted the manuscript according to the journal's guidelines, and Author 2 assisted in formatting and ensuring all submission requirements were met. Both authors collaboratively reviewed the feedback from reviewers and refined the manuscript together.

**Competing interests:** The authors declare that they have no competing interests.

**Funding:** This research was supported by a grant from Nahdlatul Ulama Indonesia University (UNUSIA), Jakarta, Indonesia (Grant No. 372/LPPM/100.02.14/XI/2022).

**Ethics approval and consent to participate** Prior to the commencement of the FGD and individual interviews, all participants signed a consent form.

#### *Publisher's Declarations*

**Editorial Acknowledgement:** The editorial process of this article was completed under the editorship of Dr. Adrijana Višnjić Jevtić

through a double-blind peer review with external reviewers.

**Publisher's Note:** Journal of Childhood, Education & Society remains neutral with regard to jurisdictional claims in published maps and institutional affiliation.

## References

- Adriany, V. (2022). Early Childhood Education in Indonesia. In L. P. Symaco & M. Hayden (Eds.), *International Handbook on Education in Southeast Asia* (pp. 1–24). Springer. [https://doi.org/10.1007/978-981-16-8136-3\\_28-1](https://doi.org/10.1007/978-981-16-8136-3_28-1)
- Adriany, V., Gunawan, I., & Anggorowati, R. (2022). Early Childhood Education and Legacy of Neoliberalism in Southeast Asian Countries: Case Study of Indonesia, Malaysia, Vietnam and Myanmar. In C. C. Wolhuter & A. W. Wiseman (Eds.), *International Perspectives on Education and Society* (pp. 79–95). Emerald Publishing Limited. <https://doi.org/10.1108/S1479-36792022000043B005>
- Adriany, V., Yulindrasari, H., & Tesar, M. (2020). Satu Desa, Satu Paud – one village, one centre. In J. Murray, B. B. Swadener, & K. Smith (Eds.), *The Routledge international handbook of young children's rights* (pp. 66–76). Routledge. <https://doi.org/10.4324/9780367142025>
- Aguilar, S. J., & Baek, C. (2020). Sexual harassment in academe is underreported, especially by students in the life and physical sciences. *PLOS ONE*, 15(3), e0230312. <https://doi.org/10.1371/journal.pone.0230312>
- Andina, E., & Arifa, F. N. (2021). Problematika Seleksi dan Rekrutmen Guru Pemerintah di Indonesia [Problems in the selection and recruitment of state teachers in Indonesia]. *Aspirasi: Jurnal Masalah-Masalah Sosial*, 12(1), 85–105. <https://doi.org/10.46807/aspirasi.v12i1.2101>
- Andrew, Y. (2016). The unavoidable salience of gender: Notes from Australian childcare work. *Gender, Place & Culture*, 23(12), 1738–1749. <https://doi.org/10.1080/0966369X.2016.1249353>
- Anthias, F. (2013). Intersectional what? Social divisions, intersectionality and levels of analysis. *Ethnicities*, 13(1), 3–19. <https://doi.org/10.1177/1468796812463547>
- Anyan, F. (2013). The Influence of Power Shifts in Data Collection and Analysis Stages: A Focus on Qualitative Research Interview. *Qualitative Report*, 18(18), 1–9.
- Ary, D., Jacobs, L. C., & Razavieh, A. (2019). *Introduction to research in education* (10th ed). Wadsworth.
- Aryasatya, A. Y., Junaidi, M. I. S., & Thofhani, L. N. A. (2025). Deconstruction of Patriarchal Authority in Religious Interpretation [Analysis of Minister of Religious Affairs Nasaruddin Umar's Statement on the Monopoly of Religious Interpretation in Indonesia in 2025]. *Jurnal Pengabdian Masyarakat Dan Riset Pendidikan*, 4(1), 6195–6203. <https://doi.org/10.31004/jerkin.v4i1.2704>
- Bangay, C. (2015). Private education: Relevant or redundant? Private education, decentralisation and national provision in Indonesia. *Compare: A Journal of Comparative and International Education*, 35(2), 167–179. <https://doi.org/10.1080/03057920500129742>
- Beaty, A., Borkoum, E., Rangarajan, A., Gage, A., Null, C., & Sethi, S. (2018). *Indonesia: Access to high-quality early childhood education crucial for continued progress on human capital development* (pp. 26–44). World Bank.
- Bhana, D., & Moosa, S. (2016). Failing to attract males in foundation phase teaching: An issue of masculinities. *Gender and Education*, 28(1), 1–19. <https://doi.org/10.1080/09540253.2015.1105934>
- Bhana, D., Moosa, S., Xu, Y., & Emilsen, K. (2022). Men in early childhood education and care: On navigating a gendered terrain. *European Early Childhood Education Research Journal*, 30(4), 543–556. <https://doi.org/10.1080/1350293X.2022.2074070>
- Bittner, M. T., & Cooney, M. H. (2003). Male teachers and gender balance in early childhood programs. *Child Care Information Exchange*, 153, 80–83.
- Bonnett, T. H., & Wade, C. E. (2023). Procuring gender-situated voices of male early childhood professionals in Canada. *International Journal of Early Childhood*, 55(2), 187–204. <https://doi.org/10.1007/s13158-022-00337-8>
- Boyd, W., & Newman, L. (2019). Primary + Early Childhood = chalk and cheese? Tensions in undertaking an early childhood/primary education degree. *Australasian Journal of Early Childhood*, 44(1), 19–31. <https://doi.org/10.1177/1836939119841456>
- Brody, D. L. (2015). The construction of masculine identity among men who work with young children, an international perspective. *European Early Childhood Education Research Journal*, 23(3), 351–361. <https://doi.org/10.1080/1350293X.2015.1043809>
- Brody, D. L., & Gor Ziv, H. (2019). Hybridized agency among male early childhood workers as a factor in their career decisions. *Early Years*, 40(1), 20–36. <https://doi.org/10.1080/09575146.2019.1605335>
- Brody, D. L., Emilsen, K., Rohrmann, T., & Warin, J. (Eds.). (2021). *Exploring career trajectories of men in the early childhood education and care workforce: Why they leave and why they stay* (1st ed.). Routledge. <https://doi.org/10.4324/9781003048473>
- Budde, J., & Rieske, T. V. (2023). Boys, Masculinity, and Education: An introduction. *Boyhood Studies*, 16(2), 1–6. <https://doi.org/10.3167/bhs.2023.160201>

- Cameron, C. (2001). Promise or problem? A review of the literature on men working in early childhood services. *Gender, Work & Organization*, 8(4), 430–453. <https://doi.org/10.1111/1468-0432.00140>
- Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education* (8th ed.). Routledge.
- Connell, R. W. (2020). *Masculinities* (2nd ed.). Routledge. <https://doi.org/10.4324/9781003116479>
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Sage.
- Creswell, J. W., & Guetterman, T. C. (2019). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (6th ed.). Pearson.
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry & research design: Choosing among five approaches* (4th ed.). Sage.
- Cushman, P. (2007). The male teacher shortage: A synthesis of research and worldwide strategies for addressing the shortage. *KEDI Journal of Educational Policy*, 4(1), 79–98.
- Davies, J. (2023). Encouraging more men to work in the early years sector. *Early Years Educator*, 23(24), 25–27. <https://doi.org/10.12968/eyed.2023.23.24.25>
- Davis, A. (2012). *Modern motherhood: Women and family in England, 1945-2000*. Manchester University Press. <https://doi.org/10.7228/manchester/9780719084553.001.0001>
- Diana, Tasu'ah, N., Zulfikasari, S., & Martika, T. (2023). ECE teachers' roles of developing numeracy literacy in special needs children. *JPUD - Jurnal Pendidikan Usia Dini*, 17(2), 267–283. <https://doi.org/10.21009/IPUD.172.06>
- Eckhardt, A. G., & Egert, F. (2020). Predictors for the quality of family child care: A meta-analysis. *Children and Youth Services Review*, 116, 105205. <https://doi.org/10.1016/j.childyouth.2020.105205>
- Eidevald, C., Bergström, H., & Broström, A. W. (2018). Maneuvering suspicions of being a potential pedophile: Experiences of male ECEC-workers in Sweden. *European Early Childhood Education Research Journal*, 26(3), 407–417. <https://doi.org/10.1080/1350293X.2018.1463907>
- Fadilah, S. (2018). Kesetaraan gender: Fenomena pergeseran peran ekonomi wanita dari tulang rusuk menjadi tulang punggung. *Mitra Gender*, 1(1), 18–26. <https://doi.org/10.29313/v1i1.3732>
- Farquhar, S. (2008). New Zealand men's participation in early years work. *Early Child Development and Care*, 178(7–8), 733–744. <https://doi.org/10.1080/03004430802352103>
- Flick, U. (2014). *An introduction to qualitative research* (5th ed.). Sage.
- Formen, A. (2018). *Governing quality in Indonesian early childhood education*. The University of Auckland.
- Gibbs, A. (2012). Focus group and group interviews. In J. Arthur, M. Waring, R. Coe, & L. Hedges (Eds.), *Research methods and methodologies in education* (pp. 186–192). Sage.
- Gill, D. L. (2020). Gender and culture. In G. Tenenbaum & R. C. Eklund (Eds.), *Handbook of sport psychology* (1st ed., pp. 1131–1151). Wiley. <https://doi.org/10.1002/9781119568124.ch55>
- Glinski, A., Schwenke, C., O'Brien-milne, L., & Farley, K. (2018). *Gender equity and male engagement: It only works when everyone plays*. International Center for Research on Women.
- Government of Indonesia. (2003). *Undang—Undang Republik Indonesia Nomor 20 tahun 2003 tentang Sistem Pendidikan Nasional*.
- Gunawan, I. F. N. A., & Krisnatuti, D. (2022). The Relationship between Economic Pressure, Husband-Wife Interaction, and Husband's Marital Satisfaction. *Journal of Child, Family, and Consumer Studies*, 1(3), 175–184. <https://doi.org/10.29244/jcfcs.1.3.175-184>
- Haines, S., Nater, C., & Sczesny, S. (2024). Creating a system that cares: A PRISMA review and road map to increase men's representation in early childhood education and care. *Psychology of Men & Masculinities*, 25(4), 451–465. <https://doi.org/10.1037/men0000486>
- Hasibuan, A. T., Simatupang, W. W., Rudini, R., & Ani, S. (2023). Implementasi Sistem Pendidikan Terbaik Dunia di Jenjang Anak Usia Dasar Telaah Sistem Pendidikan Finlandia [Implementation of the world's best education system at the early childhood level: A study of Finland's education system] *Jurnal Pembelajaran Dan Matematika Sigma*, 9(1), 120–123. <https://doi.org/10.36987/jpms.v9i1.4383>
- Hedlin, M., Åberg, M., & Johansson, C. (2019). Fun guy and possible perpetrator: An interview study of how men are positioned within early childhood education and care. *Education Inquiry*, 10(2), 95–115. <https://doi.org/10.1080/20004508.2018.1492844>
- Heikkilä, M., & Hellman, A. (2017). Male preschool teacher students negotiating masculinities: A qualitative study with men who are studying to become preschool teachers. *Early Child Development and Care*, 187(7), 1208–1220. <https://doi.org/10.1080/03004430.2016.1161614>
- Hindle, B. R., Lorimer, A., Winwood, P., & Keogh, J. W. L. (2019). The biomechanics and applications of strongman exercises: A

- systematic review. *Sports Medicine - Open*, 5(1), 49. <https://doi.org/10.1186/s40798-019-0222-z>
- Huang, R., Zheng, H., Duan, T., Yang, W., & Li, H. (2022). Preparing to be future early childhood teachers: Undergraduate students' perceptions of their identity. *Asia-Pacific Journal of Teacher Education*, 50(5), 515-533. <https://doi.org/10.1080/1359866X.2022.2066506>
- Jhuremalani, A., Tadros, E., & Goody, A. (2023). Stereo-atypical: An investigation into the explicit and implicit gender stereotypes in primary school-aged children. *Early Childhood Education Journal*, 51(7), 1115-1129. <https://doi.org/10.1007/s10643-022-01355-w>
- Jung, H., & Hasan, A. (2014). *The impact of early childhood education on early achievement gaps: Evidence from the Indonesia early childhood education and development (ECED) project* (Policy Research Working Paper No. 6794; Impact Evaluation Series). World Bank Group. <http://documents.worldbank.org/curated/en/317381468038953682/The-impact-of-early-childhood-education-on-early-achievement-gaps-evidence-from-the-Indonesia-early-childhood-education-and-development-ECED-project>
- Jurczyk, K., Jentsch, B., Sailer, J., & Schier, M. (2019). Female-breadwinner families in Germany: New gender roles? *Journal of Family Issues*, 40(13), 1731-1754. <https://doi.org/10.1177/0192513X19843149>
- Kahfi, M. A. (2022). Manajemen Berbasis Masyarakat dalam Pengelolaan Lembaga Pendidikan Anak Usia Dini. *Nusantara: Jurnal Pendidikan Indonesia*, 2(3), 589-616. <https://doi.org/10.14421/njpi.2022.v2i3-10>
- Kaiser, B., & Rasminsky, J. S. (2023). Functional assessment and positive behavior support. *YC Young Children*, 78(1), 34-39.
- Kartika, B. A. (2015). Mengapa selalu harus perempuan: Suatu konstruksi urban pemerjanaan seksual hingga hegemoni maskulinitas dalam film soekarno. *Journal of Urban Society's Arts*, 2(1), 35-54. <https://doi.org/10.24821/jousa.v2i1.1268>
- Koch, B., & Farquhar, S. (2015). Breaking through the glass doors: Men working in early childhood education and care with particular reference to research and experience in Austria and New Zealand. *European Early Childhood Education Research Journal*, 23(3), 380-391. <https://doi.org/10.1080/1350293X.2015.1043812>
- Koenig, A. M. (2018). Comparing prescriptive and descriptive gender stereotypes about children, adults, and the elderly. *Frontiers in Psychology*, 9, 1086. <https://doi.org/10.3389/fpsyg.2018.01086>
- Kowalewska, H., & Vitali, A. (2024). The female-breadwinner well-being 'penalty': Differences by men's (un)employment and country. *European Sociological Review*, 40(2), 293-308. <https://doi.org/10.1093/esr/jcad034>
- Lazaridou, A. (2024). Gender differences in educational leadership and values: Adding insights from a neuro-social perspective. *European Journal of Education and Pedagogy*, 5(5), 54-61. <https://doi.org/10.24018/ejedu.2024.5.5.837>
- Lazuardi, C. M., & Puspitawati, H. (2022). Gender's role in financial management and purchasing decisions on the quality of dual-earner family marriage during the covid-19 pandemic. *Journal of Child, Family, and Consumer Studies*, 1(2), 96-107. <https://doi.org/10.29244/jcfcs.1.2.96-107>
- Marsh, H. W., Martin, A. J., & Cheng, J. H. S. (2008). A multilevel perspective on gender in classroom motivation and climate: Potential benefits of male teachers for boys?. *Journal of Educational Psychology*, 100(1), 78-95. <https://doi.org/10.1037/0022-0663.100.1.78>
- Martino, W. J. (2008). Male teachers as role models: Addressing Issues of masculinity, pedagogy and the re-masculinization of schooling. *Curriculum Inquiry*, 38(2), 189-223.
- Mathwasa, J., & Sibanda, L. (2021). Male educator recruitment in early childhood centres: Implications for teacher education. In U. Kayapinar (Ed.), *Teacher Education: New Perspectives* (pp.103-118). IntechOpen. <https://doi.org/10.5772/intechopen.97085>
- Mbah, N. L. (2023). African Masculinities. In N. L. Mbah, *African studies*. Oxford University Press. <https://doi.org/10.1093/obo/9780199846733-0230>
- McDonald, P., Coles, L., & Thorpe, K. (2024). How women educators frame the scarcity of men in early childhood education and care. *Gender and Education*, 36(5), 510-526. <https://doi.org/10.1080/09540253.2024.2357825>
- McDowell, J. (2023). If you're a male primary teacher, there's a big "why are you doing that? What is wrong with you?" Gendered expectations of male primary teachers: The 'double bind.' *Sociology Compass*, 17(12), e13145. <https://doi.org/10.1111/soc4.13145>
- Mills, M., Haase, M., & Charlton, E. (2008). Being the 'right' kind of male teacher: The disciplining of John. *Pedagogy, Culture & Society*, 16(1), 71-84. <https://doi.org/10.1080/14681360701877792>
- Ministry of Education and Culture. (2014). *Peraturan menteri pendidikan dan kebudayaan nomor 137 tahun 2014 tentang standar nasional pendidikan anak usia dini*. Kementerian Pendidikan dan Kebudayaan, Republik Indonesia.
- Ministry of Education, Culture, Research and Technology. (2025). *Statistik pendidikan anak usia dini 2024/2025 [Statistics on early childhood education and care in indonesia]*. Pusat Data dan Teknologi Informasi, Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi.
- Miskuska, E., & Fairchild, N. (2020). Working with (post) theories to explore embodied and unrecognised emotional labour in English Early Childhood Education and Care (ECEC). *Global Education Review*, 7(2), 75-89.
- Murray, S. B. (1996). "We all love Charles": Men in child care and the social construction of gender. *Gender & Society*, 10(4), 368-385.

<https://doi.org/10.1177/089124396010004002>

- Naeem, M., Ozuem, W., Howell, K., & Ranfagni, S. (2023). A step-by-step process of thematic analysis to develop a conceptual model in qualitative research. *International Journal of Qualitative Methods*, 22, 1-18. <https://doi.org/10.1177/16094069231205789>
- Nakajima, N., Hasan, A., Jung, H., Kinnell, A., Maika, A., & Pradhan, M. (2021). Built to last: Sustainability of early childhood education services in rural Indonesia. *The Journal of Development Studies*, 57(10), 1593–1612. <https://doi.org/10.1080/00220388.2021.1873283>
- Nasution, A. (2017). The government decentralization program in Indonesia. In N. Yoshino & P. J. Morgan (Eds.), *Central and local government relations in Asia*. Edward Elgar Publishing. <https://doi.org/10.4337/9781786436870.00017>
- Nugroho, M., Izzati, U. A., Bachri, B. S., Khamidi, A., & Hariyati, N. (2024). Factors affecting the form of teacher recruitment in schools. *Jurnal Indonesia Sosial Teknologi*, 5(6), 2677-2689. <https://doi.org/10.59141/jist.v5i6.1142>
- Okeke, C. I., & Nyanhoto, E. (2021). Recruitment and retention of male educators in preschools: Implications for teacher education policy and practices. *South African Journal of Education*, 41(2), 1–12. <https://doi.org/10.15700/saje.v41n2a1910>
- Olson, K. R., Durwood, L., Horton, R., Gallagher, N. M., & Devor, A. (2022). Gender identity 5 years after social transition. *Pediatrics*, 150(2), e2021056082. <https://doi.org/10.1542/peds.2021-056082>
- Olsson, M., & Martiny, S. E. (2018). Does exposure to counterstereotypical role models influence girls' and women's gender stereotypes and career choices? A review of social psychological research. *Frontiers in Psychology*, 9, 2264. <https://doi.org/10.3389/fpsyg.2018.02264>
- Organisation for Economic Co-operation and Development. (2019). *Good practice for good jobs in early childhood education and care: Eight policy measures from OECD countries*. OECD. <https://doi.org/10.1787/64562be6-en>
- Pangastuti, Y. (2020). *Expansion of early childhood education in Indonesia: Finding Voices, telling stories*. The University of Auckland.
- Peeters, J., Rohrmann, T., & Emilsen, K. (2015). Gender balance in ECEC: Why is there so little progress? *European Early Childhood Education Research Journal*, 23(3), 302–314. <https://doi.org/10.1080/1350293X.2015.1043805>
- Pranoto, L., Juliana, & Hasanah, W. (2021). *Teacher professional development at scale in Indonesia: A collective case study of three teacher learning centres*. Foundation for Information Technology Education and Development.
- Pruit, J. C. (2015). Preschool teachers and the discourse of suspicion. *Journal of Contemporary Ethnography*, 44(4), 510–534. <https://doi.org/10.1177/0891241614545882>
- Putri, N., & Irawan, E. (2021). Analisis metode smart rekrutmen guru baru tk/paud lestari di kabupaten simalungun [Analysis of the SMART method for recruiting new kindergarten/early childhood teachers at Lestari in Simalungun Regency]. *Jurnal Riset Sistem Informasi Dan Teknik Informatika*, 6(1), 207-216.
- Putri, S. A. A. K., & Karwanto. (2021). Sistem rekrutmen guru dalam upaya meningkatkan mutu pendidikan [Teacher recruitment system in efforts to improve the quality of education]. *Inspirasi Manajemen Pendidikan*, 9(1), 229-239.
- Qomario, Q., Kurniasih, S., & Anggraini, H. (2018). Qomario, Q., Kurniasih, S., & Anggraini, H. (2018). Studi analisis latar belakang pendidikan, sertifikasi guru dan usia guru PAUD di Kota Bandar Lampung berdasarkan hasil nilai uji kompetensi guru (UKG) [An analytical study of educational background, teacher certification, and age of early childhood teachers in Bandar Lampung City based on teacher competency test (UKG) results]. *Jurnal Cakrasana: Pendidikan Anak Usia Dini*, 1(2), 81-101. <https://doi.org/10.31326/jcpaud.v1i02.180>
- Ramdaeni, S., Adriany, V., & Yulindrasari, H. (2020). Gender and toys in early childhood education. *Proceedings of the International Conference on Early Childhood Education and Parenting 2019 (ECEP 2019)*. International Conference on Early Childhood Education and Parenting 2019 (ECEP 2019), Jakarta, Indonesia. <https://doi.org/10.2991/assehr.k.200808.049>
- Reich-Shapiro, M., Cole, K., & Plaisir, J. Y. (2020). "I Am the Teacher": How male educators conceptualize their impact on the early childhood classroom. *Journal of Early Childhood Teacher Education*, 42(4), 381–403. <https://doi.org/10.1080/10901027.2020.1754310>
- Rentzou, K. (2011). Greek parents' perceptions of male early childhood educators. *Early Years*, 31(2), 135–147. <https://doi.org/10.1080/09575146.2010.530247>
- Rieber, R. W., & Carton, A. S. (Eds.). (1988). *The collected works of L. S. Vygotsky*. Springer. <https://doi.org/10.1007/978-1-4613-1655-8>
- Rinaldo, R. (2019). Obedience and authority among muslim couples: negotiating gendered religious scripts in contemporary Indonesia. *Sociology of Religion*, 80(3), 323–349. <https://doi.org/10.1093/socrel/sry045>
- Robinson, K. H. (2013). *Innocence, knowledge and the construction of childhood*. Routledge. <https://doi.org/10.4324/9780203117538>
- Rohrmann, T. (2020). Men as promoters of change in ECEC? An international overview. *Early Years*, 40(1), 5–19. <https://doi.org/10.1080/09575146.2019.1626807>
- Rohrmann, T., Brody, D. L., & Plaisir, J.-Y. (2021). A diversity of cultural and institutional contexts. In D. L. Brody, K. Emilsen, T.

- Rohrmann, & J. Warin (Eds.), *Exploring career trajectories of men in the early childhood education and care workforce: Why they leave and why they stay*. (pp. 28-40). Routledge. <https://doi.org/10.4324/9781003048473>
- Sak, R., Rohrmann, T., Şahin Sak, İ. T., & Schauer, G. (2019). Parents' views on male ECEC workers: A cross-country comparison. *European Early Childhood Education Research Journal*, 27(1), 68–80. <https://doi.org/10.1080/1350293X.2018.1556535>
- Sargent, P. (2005). The gendering of men in early childhood education. *Sex Roles*, 52(3–4), 251–259. <https://doi.org/10.1007/s11199-005-1300-x>
- Saunders, B., Kitzinger, J., & Kitzinger, C. (2015). Anonymising interview data: Challenges and compromise in practice. *Qualitative Research*, 15(5), 616–632. <https://doi.org/10.1177/1468794114550439>
- Saxonberg, S. (2024). Exploring the alternatives to the male-breadwinner model – the implications for social policy study. *Social Policy and Society*, 24(1), 6-15. <https://doi.org/10.1017/S1474746424000113>
- Sczesny, S., Nater, C., & Haines, S. (2022). Perceived to be incompetent, but not a risk: Why men are evaluated as less suitable for childcare work than women. *Journal of Applied Social Psychology*, 52(8), 693–703. <https://doi.org/10.1111/jasp.12845>
- Shabina, S., Amit, T. K., Eram, P., Pranav, K., & Deeksha, G. (2024). Focus group discussion: An emerging qualitative tool for educational research. *International Journal of Research and Review*, 11(9), 302–308. <https://doi.org/10.52403/ijrr.20240932>
- Shofiah, A. N., & Munandar, C. (2023). Dilema linieritas dan kualifikasi akademik: Meningkatkan profesionalisme guru PAUD. *Murhum : Jurnal Pendidikan Anak Usia Dini*, 4(2), 374–386. <https://doi.org/10.37985/murhum.v4i2.253>
- Sigiro, A. N. (2013). Women and family welfare in Indonesia: A critique of the family model “man as the breadwinner”. *Indonesian Feminist Journal*, 1, 33–42.
- Simatupang, R. (2019). *Evaluation of decentralization outcomes in Indonesia: Analysis of health and education sectors* [Doctoral Dissertation]. Georgia State University. <https://doi.org/10.57709/1347969>
- Skelton, C. (2003). Male primary teachers and perceptions of masculinity. *Educational Review*, 55(2), 195–209. <https://doi.org/10.1080/0013191032000072227>
- Smith, B. J., Woodward, M. R., & Smith, B. J. (Eds.). (2014). *Gender and power in Indonesian Islam: Leaders, feminists, Sufis and pesantren selves*. Routledge.
- Solomon, J. (2016). Gender identity and expression in the early childhood classroom. *YC Young Children*, 71(3), 61–72.
- Sullivan, A. D.W., Rancher, C., & Moreland, A. (2024). Early childhood educators' adverse childhood experiences (ACEs) Link with psychological and economic wellbeing. *Early Childhood Education Journal*, 53, 881-889. <https://doi.org/10.1007/s10643-024-01638-4>
- Sullivan, V., Coles, L., Xu, Y., Perales, F., & Thorpe, K. (2020). Beliefs and attributions: Insider accounts of men's place in early childhood education and care. *Contemporary Issues in Early Childhood*, 21(2), 126–137. <https://doi.org/10.1177/1463949120929462>
- Sumsion, J. (2000). Negotiating Otherness: A male early childhood educator's gender positioning. *International Journal of Early Years Education*, 8(2), 129–140. <https://doi.org/10.1080/09669760050046174>
- Sumsion, J. (2005). Male teachers in early childhood education: Issues and case study. *Early Childhood Research Quarterly*, 20(1), 109–123. <https://doi.org/10.1016/j.ecresq.2005.01.001>
- Surya, P. (2016). Student teacher recruitment in Indonesia: An initial step to promote teacher professionalism and teaching professionalization. *Proceedings of the 6th International Conference on Educational, Management, Administration and Leadership*. 6th International Conference on Educational, Management, Administration and Leadership, Bandung, Indonesia. <https://doi.org/10.2991/icemal-16.2016.94>
- Swick, K. J., & Brown, M. H. (1999). The caring ethic in early childhood teacher education. *Journal of Instructional Psychology*, 26(2), 116–127.
- Tan, C. (2017). Teaching critical thinking: Cultural challenges and strategies in Singapore. *British Educational Research Journal*, 43(5), 988–1002. <https://doi.org/10.1002/berj.3295>
- Tan, W. S. (2017). Problems of conducting equal education rights for non-formal education: Challenges for Batam local government. *Indonesian Law Review*, 7(2), 230–244.
- The World Bank. (2013). *Early childhood education and development in Indonesia: Strong foundations, later success*. World Bank.
- Thorpe, K., Sullivan, V., Jansen, E., McDonald, P., Sumsion, J., & Irvine, S. (2020). A man in the centre: Inclusion and contribution of male educators in early childhood education and care teaching teams. *Early Child Development and Care*, 190(6), 921–934. <https://doi.org/10.1080/03004430.2018.1501564>
- Trappe, H., Pollmann-Schult, M., & Schmitt, C. (2015). The rise and decline of the male breadwinner model: Institutional underpinnings and future expectations. *European Sociological Review*, 31(2), 230–242. <https://doi.org/10.1093/esr/jcv015>
- Tyng, C. M., Amin, H. U., Saad, M. N. M., & Malik, A. S. (2017). The influences of emotion on learning and memory. *Frontiers in*

- Psychology*, 8, 1454. <https://doi.org/10.3389/fpsyg.2017.01454>
- Vainio, A. (2013). Beyond research ethics: Anonymity as 'ontology', 'analysis' and 'independence.' *Qualitative Research*, 13(6), 685–698. <https://doi.org/10.1177/1468794112459669>
- Van Laere, K., Vandenbroeck, M., Roets, G., & Peeters, J. (2014). Challenging the feminisation of the workforce: Rethinking the mind-body dualism in Early Childhood Education and Care. *Gender and Education*, 26(3), 232–245. <https://doi.org/10.1080/09540253.2014.901721>
- Vygotsky, L. S. (1978). *Mind in society: Development of higher psychological processes* (M. Cole, V. Jolm-Steiner, S. Scribner, & E. Souberman, Eds.). Harvard University Press. <https://doi.org/10.2307/j.ctvjf9vz4>
- Vygotsky, L. S., Hanfmann, E., Vakar, G., & Kozulin, A. (2012). *Thought and language* (Rev. and expanded ed). MIT Press.
- Warin, J. (2018). *Men in early childhood education and care: Gender balance and flexibility*. Palgrave McMillan.
- Warin, J., & Adriany, V. (2017). Gender flexible pedagogy in early childhood education. *Journal of Gender Studies*, 26(4), 375–386. <https://doi.org/10.1080/09589236.2015.1105738>
- Warren, T. (2007). Conceptualizing breadwinning work. *Work, Employment and Society*, 21(2), 317–336. <https://doi.org/10.1177/0950017007076642>
- Widianti, A., Aryanata, N. T., & Pramitya, A. A. I. M. (2018). The exploration of empathy of the inclusive elementary school teacher in Denpasar. *Proceedings of the 1st International Conference on Creativity, Innovation and Technology in Education (IC-CITE 2018)*. Proceedings of the 1st International Conference on Creativity, Innovation and Technology in Education (IC-CITE 2018), Banjarmasin, Indonesia. <https://doi.org/10.2991/iccite-18.2018.7>
- Wijoyo, H. (2020). Socialization of the accreditation assessment system (SISPENA) of the national accreditation board for early childhood education (PAUD) and non formal education (PNF) In Bengkalis, Riau Province. *Jurnal Humanities Pengabdian Kepada Masyarakat*, 1(1), 23–29. <https://doi.org/10.24036/jha.0102.2019.3>
- Wohlgemuth, U. G. (2015). Why do men choose to become pedagogues? A profession continuously in pursuit of male colleagues. *European Early Childhood Education Research Journal*, 23(3), 392–404. <https://doi.org/10.1080/1350293X.2015.1043813>
- Wulandari, & Abdullah, S. S. (2024). "Reach out, not harm": Navigating between physical punishment and alternative strategies in addressing student discipline challenges for a positive learning environment. *International Journal of Learning, Teaching and Educational Research*, 23(8), 222–243. <https://doi.org/10.26803/ijlter.23.8.12>
- Wulandari, L. S. (2013). Rekrutmen guru taman kanak-kanak di kecamatan kokap kabupaten kulon progo [Recruitment of kindergarten teachers in Kokap district, Kulon Progo]. *Hanata Widya*, 2(2), 3-18.
- Xu, Y. (2021). Challenging gender stereotypes through gender-sensitive practices in early years education and care. *Early Education Journal*, 93, 10–12.
- Xu, Y., & Waniganayake, M. (2018). An exploratory study of gender and male teachers in early childhood education and care centres in China. *Compare: A Journal of Comparative and International Education*, 48(4), 518–534. <https://doi.org/10.1080/03057925.2017.1318355>
- Xu, Y., Schweisfurth, M., & Read, B. (2022). Men's participation in early childhood education and care (ECEC): Comparative perspectives from Edinburgh, Scotland and Tianjin, China. *Comparative Education*, 58(3), 345–363. <https://doi.org/10.1080/03050068.2022.2062950>
- Yulindrasari, H. (2012). *ECCE in Indonesia: Policy and challenges* (ECEC Around the World). Child Research Net.
- Yulindrasari, H. (2017). Conflicting social perceptions of men who teach in Indonesian kindergartens. *Proceedings of the 3rd International Conference on Early Childhood Education (ICECE 2016)*. 3rd International Conference on Early Childhood Education (ICECE 2016), Bandung, Indonesia. <https://doi.org/10.2991/icece-16.2017.41>
- Zara, G., Binik, O., Ginocchio, D., Merzagora, I., Giannini, A., Addabbo, T., Castelli, L., Criscenti, C., Ferrari, S., Di Tella, M., Freilone, F., Lausi, G., Rossetto, I., Veggì, S., & De Fazio, G. L. (2024). Looking for a preventive approach to sexual harassment in academia. A systematic review. *European Journal on Criminal Policy and Research*. <https://doi.org/10.1007/s10610-024-09582-0>
- Zidan, M. Z. (2024). Sistem Perekrutan Marketplace Guru terhadap Nasib Guru Honorer di Indonesia. *Journal of Islamic Education Studies*, 9(1), 41–52. <https://doi.org/10.15642/joies.2024.9.1.41-52>
- Zulfa, E. A., Febriansyah, A., Ramadhan, J., & Hayatullah, I. K. (2024). The use of physical strength in children's education: Learning from Indonesian court's judgments. *Sriwijaya Law Review*, 8(1), 115-132. <https://doi.org/10.28946/slrev.Vol8.Iss1.3014.pp115-132>

# Parental coaching strategies for child failure resilience: Predictors and child mastery motivation

Wen Wang<sup>1</sup>, Ashley M. Fraser<sup>2</sup>, Kelsey Lucca<sup>3</sup>, Fahad Usman<sup>4</sup>, Ying Huang<sup>5</sup>, Camille Elder<sup>6</sup>

**Abstract:** Early encounters with failure can serve as a double-edged sword for children, offering either valuable learning experiences or posing challenges to future achievement. However, a significant research gap remains regarding how parents coach their children to cope with failure. This study developed a novel survey to measure parents' coaching strategies in response to children's failure in math, reading, and extracurricular learning activities, and explored their associations with child mastery motivation and predictors. A sample of 145 primary caregivers (87% biological mothers) of children aged 4 to 7 (mean age = 6.02, and 45% boys) was recruited both locally and online in the US. Primary caregivers completed an online survey. Factor analysis was utilized to identify parents' coaching strategies, and multiple regression analysis was adopted to examine the predictors and outcomes of these strategies. We identified three distinct coaching strategies: Emotion-Coaching Strategies, Persistence Strategies, and Permissive/Minimization Strategies. Emotion-Coaching and Persistence Strategies were positively correlated with children's mastery motivation, including object-oriented persistence, mastery pleasure, and general competence. Conversely, Permissive/Minimization Strategies were linked to lower mastery pleasure and higher negative reactions to failure. Furthermore, parents' and children's personal traits predicted parents' coaching strategies. Specifically, parents' grit and children's effortful control were related to Emotion-Coaching Strategies, while parents' failure mindsets, grit, and perfectionism correlated with Persistence Strategies. Family income significantly predicted Permissive/Minimization Strategies. The findings highlight the complexities of parental coaching approaches and their implications for fostering resilience in children facing failure in their learning journeys.

## Article History

Received: 14 June 2025

Accepted: 17 November 2025

## Keywords

Parents' coaching strategies;

Failure resilience;

Mastery motivation;

Failure mindset;

Grit

## Introduction

Experiencing failure is inherently stressful and uncomfortable, yet unavoidable in the journey of learning. In children's academic and extracurricular learning, a failure experience refers to not being able to achieve the learning goals or obtain the competence that is expected either by themselves or by others. Failure can be a double-edged sword – it can be a crisis for future achievement and relate to negative health consequences (Penzel et al., 2017), but it can also be an opportunity for growth and mastery, depending on the context and individual coping strategies (Skinner & Wellborn, 1994). Indeed, researchers have found that young children present a variety of reactions to frustrating failure. Some resilient reactions include being persistent in solving the problems, adjusting strategies, and seeking help and support, while the maladapted reactions were observed as expressed emotions (e.g., annoyed, frustrated, helpless in extreme cases), giving up, or avoiding risks of failure in the future (Balk, 1983; Ziegert et al., 2001). It is more

<sup>1</sup> North Dakota State University, Faculty, Department of Human Development and Family Science, Fargo, United States, e-mail: [wen.wang@ndsu.edu](mailto:wen.wang@ndsu.edu), ORCID: <https://orcid.org/0000-0002-3778-4166>

<sup>2</sup> Brigham Young University, Faculty, School of Family Life, Provo, United States, e-mail: [ashley\\_fraser@byu.edu](mailto:ashley_fraser@byu.edu), ORCID: <https://orcid.org/0000-0002-2002-3512>

<sup>3</sup> Arizona State University, Faculty, Department of Psychology, Tempe, United States, e-mail: [klucca@asu.edu](mailto:klucca@asu.edu), ORCID: <https://orcid.org/0000-0002-0581-2257>

<sup>4</sup> North Dakota State University, Department of Human Development and Family Science, Fargo, United States, e-mail: [fahad.usman@ndsu.edu](mailto:fahad.usman@ndsu.edu), ORCID: <https://orcid.org/0009-0005-7840-4122>

<sup>5</sup> North Dakota State University, Faculty, Department of Civil, Construction, and Environmental Engineering, Fargo, United States, e-mail: [ying.huang@ndsu.edu](mailto:ying.huang@ndsu.edu), ORCID: <https://orcid.org/0000-0003-4119-9522>

<sup>6</sup> Brigham Young University, School of Family Life, Provo, United States, e-mail: [riddcamille@gmail.com](mailto:riddcamille@gmail.com), ORCID: <https://orcid.org/0009-0003-5790-2101>

important for caregivers to focus on helping children become “failure resilient:” accepting failure, learning from failure, and overcoming failure to achieve their goals, rather than just trying to prevent failure or raise a child who only “succeeds.” However, how parents socialize young children’s failure resilience is largely understudied in the existing literature. The current study explored parents’ practices in helping their children deal with failure in everyday learning contexts, investigated the relations between these parental strategies and child reactions to failure and setbacks (i.e., four dimensions of mastery motivation), and examined predictors (i.e., parent failure mindsets, grit, perfectionism, child temperament) of these parental strategies. Findings might shed light on interventions and programs to enhance caregivers’ ability to support their children in learning and overall well-being.

### **Parent Coaching Strategies in Response to Children’s Failure**

Failure is an emotionally salient experience that consistently results in significant emotional distress, including frustration, shame, and sadness (Johnson et al., 2017). While emotional experiences are natural and value-neutral, children’s emotional coping skills are essential to positive behaviors such as persistence. Negative, unregulated emotional reactions to failure can lead to self-focusing attention, which hinders the implementation of effective problem-solving strategies (Krohne et al., 2002). Thus, parents’ emotion-conscious strategies may shape children’s behaviors and mindsets in dealing with failure. According to the meta-emotion philosophy, some parents view negative emotions as opportunities for intimacy or teaching (emotion coaching strategies; Gottman et al., 1996). These parents encourage children to express negative emotions and actively guide them in managing their distress. Empirical research has consistently demonstrated that parents’ emotional supportiveness enhances their children’s adaptive responses to failure and challenges, such as persistence in challenges (Mokrova et al., 2012; Wang et al., 2023). Based on Self-determination theory (SDT), emotion-coaching parenting may improve children’s motivation to overcome challenges because of the enhancement of children’s feelings of autonomy, competence, and relatedness (Ryan & Deci, 2000). Thus, children accept their feelings, feel secure, and have an appropriate recovery from failure. Conversely, emotion-dismissing parents refer to those parents who tend to minimize or feel distressed about their children’s negative emotions. Researchers have shown the profound negative effects of parents’ emotion-dismissing on children’s social-emotional adjustments, including later internalizing and externalizing behaviors and low self-regulation (Frogley et al., 2023).

In addition to emotion-conscious strategies, parents may also help their children enhance their problem-solving skills in order to battle failure. Specifically, parents may emphasize the power of persistence, provide possible solutions, and help them see the value of the learning activity. These strategies have been found to benefit children’s academic achievement (Pomerantz et al., 2005). In addition, with infants and preschoolers, parents’ cognitive stimulation (i.e., providing solution options and guidance for the next step) and encouragement of persistence and effort predicted young children’s persistence in challenging tasks (Lucca et al., 2019). Conversely, parents may view themselves as bystanders and adopt permissive strategies by letting children experience failure independently and allowing children to shift goals or explore alternative interests instead of persevering through the challenge. However, parents’ lack of involvement hasn’t been studied in the context of young children’s failure resilience. Previous studies with school-aged children showed that parents’ involvement, especially parents’ expectations of their children’s achievement, is related to children’s higher academic achievement (a meta-synthesis, Wilder, 2014). It is possible that, in the context of failure resilience socialization, parents’ messages of persistence and problem-solving strategies help young children to accept and overcome failure, and parents’ lack of involvement may be related to children’s poor adjustment to failure.

Parental coaching strategies in helping children deal with failure in daily learning experiences may shape children’s motivation development. From as early as toddlerhood and preschool years, children exhibit an intrinsic curiosity for learning and a determination to achieve their goals (Gilmore et al., 2003). This psychological trait is commonly referred to as mastery motivation in early childhood (Barrett et al., 1993) or intrinsic motivation (Ryan & Deci, 2000), and it evolves into what is known as grit during adolescence and adulthood (Duckworth et al., 2007). Children with strong mastery motivation tend to

demonstrate resilience in the face of failure and adversity, sustaining their interests and effort in learning despite challenges (Barrett & Morgan, 2018; Duckworth et al., 2007). Mastery motivation is widely recognized as a multifaceted construct. Beyond task persistence, it encompasses confidence in pursuing success, curiosity about the unknown, and a preference for challenging tasks (Barrett & Morgan, 2018). Parents' use of emotion-conscious strategies and problem-solving strategies may help children learn that failure is manageable, facilitate children to obtain intrinsic interests in learning, and foster their willingness to challenge themselves to the next level of achievement. In contrast, emotion-dismissing and permissive parents may send children a signal that failure is discouraging and that abandoning difficult tasks is an acceptable solution, ultimately undermining children's mastery motivation. This study aims to examine the associations between parents' coaching strategies and children's mastery motivation, providing deeper insight into the pivotal role of parenting in children's learning and failure resilience.

### **Individual Differences of Parents' Socialization of Young Children's Failure Resiliency**

Another goal of the current study is to understand the individual differences in parents' coaching strategies. Parenting practices can be largely shaped by their beliefs and attitudes (Bornstein et al., 2018). Thus, when responding to children's failure, parents' coaching strategies can be largely shaped by their attitudes toward their own failure and their children's failure. Based on the growth mindset theory (Dweck, 2016), when experiencing obstacles, individuals with a growth mindset tend to view failure as an opportunity for learning and development, instead of perceiving failure as an obstacle to productivity and learning. In the context of parenting, parents with a growth failure mindset might be more likely to use failure as a teaching moment, guiding their children to reflect on the experience and persist in their efforts. In contrast, parents with a debilitating failure mindset may shield their children from failure, which may result in less encouragement for persistence.

Although researchers have shown that parents' attitudes toward failure are perceptible and influence children's growth mindsets (Su & He, 2024; Tao et al., 2022), few studies have examined the effects of parents' failure mindsets on their parenting practices. Studies with adolescents suggest that parents with growth-failure mindsets exhibit greater trust in their children's academic learning (Liu et al., 2023), whereas parents with debilitating-failure mindsets tend to undervalue their children's academic performance and engage in overcontrolling behaviors (e.g., Ching et al., 2023). Haimovitz and Dweck (2016) found that, with debilitating-failure mindsets, parents were more likely to have concerns about their children's performance and less likely to support their children's learning than parents with a growth-failure mindset. Importantly, one issue that has been ignored in previous studies is that parents' beliefs about their own failure may differ from their beliefs about their children's failure. For example, while some parents with a growth-failure mindset might believe in the value of failure for personal growth, they may still perceive their children's failure as harmful, prompting protective behaviors, especially for young children.

Parents' grit is another predictor of their failure-resilience socialization approaches. Grit, the compound of passion and perseverance in achieving long-term goals despite setbacks, obstacles, and failure (Duckworth et al., 2007), is associated with resilience and a growth-failure mindset (Calo et al., 2022). Parents with high grit are more likely to embrace failure as part of the learning process and exhibit lower stress in response to setbacks (Lee, 2017). Grit may translate into parents' emotion-coaching and persistence-focused strategies.

Another personality component that is related to failure resilience is perfectionism. Although both grit and perfectionism are related to achievement striving, grit is related to adaptive attitudes to failure, whereas perfectionism may be related to toxic values regarding failure due to the unreasonably high expectations and relentless pursuit of success (Dunn et al., 2021). This mentality leads to significant self-criticism for not reaching personal goals, and the generalization of an individual setback to overall self-evaluation (Burgess et al., 2016). Parents' perfectionism is related to their children's poor psychological well-being (Lilley et al., 2020). However, a meta-analysis of 14 studies found that the linkage between parents' perfectionism and children's outcomes was small ( $r = 0.153$ ; Lilley et al., 2020), which implies

variations in the family socialization process and the importance of investigating the mechanism through which parents' perfectionism impacts their parenting. Perfectionist parents with unrealistically high expectations of children's performance may be less tolerant of children's failure, which causes parents high levels of stress (Lee et al., 2012) and, in turn, may lead them to show more criticism and distress responses to children's failure.

Other than parents' characteristics, children's characteristics are also a determinant of parenting (Belsky, 1984). In the context of children's failure resilience socialization, children's temperament might also shape parents' coaching strategies. Effortful control, which refers to the ability to regulate attention and behavior (Putnam & Rothbart, 2006), significantly contributes to parent-child interactions, which has been studied in growing research on the bidirectional relations between parenting and children's temperament (e.g., Wittig & Rodriguez, 2019). One way of understanding the impact of children's effortful control on parenting is through the evocative gene-environment effects perspective (Klahr et al., 2013). That is, children with high effortful control may elicit more warmth and positive reactions from parents, and low effortful control children may evoke parents' frustration, negative discipline, and low warmth (Tiberio et al., 2016). Similarly, parents may be more inclined to soothe and encourage children with high effortful control but feel more parental distress and generate less effective strategies toward low effortful control children. Wilson et al., (2014) found that parents of non-aggressive, socially well-adjusted children were more likely to employ emotion-coaching strategies than parents of aggressive or socially rejected children.

### **The Current Study**

The current study investigated parents' coaching strategies for socializing young children's resilience to failure in early academic and extracurricular learning during preschool and early elementary school age. Specifically, this research addressed three primary questions: 1) What coaching strategies do parents utilize to help their children cope with failure? 2) How are parents' coaching strategies associated with child mastery motivation? 3) What parent and child factors predict these strategies? Although previous studies showed the importance of parenting styles in shaping children's failure mindset, no studies assessed parents' reactions to young children's failure. Compared to adolescents and adults, it might be more challenging for young children to see the value of failure, and parents' coaching may be critical for their mastery motivation and later failure mindset development. To address this gap, we aim to develop a survey to assess parents' coaching strategies across two dimensions: emotion-conscious and strategy-focused approaches, both relevant to young children's learning. We hypothesized that effective strategies include emotion-coaching and problem-solving strategies, while dismissing and permissive strategies would be maladaptive.

According to Barrett and Morgan (1993), mastery motivation can be assessed by measuring two key components: the instrumental aspect, which motivates goal-oriented attempts and persistence in challenging tasks, and the expressive aspect, which indicates the affective reactions while an individual is working on a challenging task or just completing it. The current study adopted Morgan et al.'s, (2019) short version of Dimensions of Mastery Motivation, and evaluated four aspects of child mastery motivation, including the child's goal-oriented persistence, positive affection after completing the task (i.e., excitement and pride), negative affection and reaction toward failure (i.e., frustration and giving-up), and general competence. It is hypothesized that parents' effective strategies would be positively related to children's goal-oriented persistence, positive mastery affect, and general competence; while parents' maladaptive strategies would be negatively related to these aspects of children's mastery motivation. Notably, children's frustration toward failure may not necessarily be a negative indicator of their mastery motivation. Previous studies showed that children's frustration in goal-blocking tasks at toddlerhood was positively related to their goal-oriented attempts at school age (He et al., 2016). However, because previous studies found correlations between unregulated negative emotional reactions and less persistence in challenging tasks (e.g., Eskreis-Winkler & Fishbach, 2019), we further hypothesized that parents' effective coaching strategies were negatively related to the negative-reaction-to-failure aspect of mastery motivation. For the third question, we hypothesized that parents' positive failure mindsets (toward their

own and children's failure), grit, and children's high effortful control would be associated with parents' effective strategies, whereas parents' perfectionism would be related to maladaptive strategies.

## Method

### Participants

Participants were recruited in a Midwest U.S. city via local public libraries, public elementary school advertisements, and online parenting groups in another Midwest city, with the requirements of primary caregivers who currently have children aged 4 to 7. Eligible participants were individually emailed with an online survey link. One hundred and forty-five primary caregivers (age  $M = 35.38$ ,  $SD = 5.00$ ) with young children (45% boys; age  $M = 6.02$ ,  $SD = 1.05$ ) filled out the survey. The majority of the participants were White (83%), married (86%), biological mothers (87%), with Bachelor's degrees and above (67.4%), with some variations in family income (more demographic information in Table 1).

Parents filled out the questionnaires regarding demographics, their failure mindset, grit, and perfectionism, and were requested to refer to the oldest child between the ages of 4 and 7 when they answered their children's demographic information, temperament, parents' attitudes toward children's failure, and parent coaching strategies. This data collection was approved by North Dakota State University Institutional Review Board (No. IRB0004799), and conducted from June to September 2023. The privacy rights of participants have been observed. Informed consent was obtained from participants for conducting the survey. Participants were compensated with a \$30 gift card for completing the survey.

**Table 1**  
*Demographic Information of the Sample*

Demographic Category		Percentage
Primary caregiver	Biological mother	87.4%
	Biological father	9.1%
	Step and Adopted mother	2.1%
	Other (grandparents and other family members)	1.4%
Marital Status	Married	82.7%
	Single never married	6.7%
	Divorced	3.3%
	Separated	2.7%
	Other	.7%
Race of Primary Caregiver	White	82.6%
	Black	7.6%
	Asian	4.2%
	American Indian and Alaska Native	2.7%
	Native Hawaiian and Pacific Islander	.7%
	Other	2%
Highest Degree	Less than a high school degree	.7%
	High school degree	7.6%
	Some college, no degree	14.6%
	Associate's degree	9.7%
	Bachelor's degree	43.1%
	Master's degree	17.4%
Income	Doctoral or professional degree	6.9%
	under \$45,000	15%
	\$45,000 - \$59,999	17%
	\$60,000 - \$74,999	13%
	\$75,000 - \$99,999	21%
	\$100,000 to \$149,999	20%
above \$150,000	14%	

## Measures

### *Parent Coaching Strategies Reacting to Children's Failure*

Three scenarios and eleven strategies were designed to assess parents' coaching strategies for children's failure. Participants were requested to imagine that their children failed in three scenarios of math, reading, and extracurricular learning. And they rated how likely they would adopt each proposed strategy on a 5-point Likert scale (1 = *Not like me at all* to 5 = *Very much like me*) (see Table 2). The eleven strategies were designed to represent different aspects of parents' coaching strategies, including three items for *Emotion-Coaching Strategies* (e.g., Hug my child and be emotionally available); two items for *Emotion-Dismissing Strategies* (e.g., Feel upset that my child is more emotional than they should be), three items for *Problem-Solving Strategies* (e.g., Provide some strategies and figure out a different way together), and three items were designed for *Permissive Strategies* (e.g., Let my child experience the failure and figure it out by themselves). The eleven strategies were presented in a random order after each scenario. The score for each strategy was calculated as the average rating across the three scenarios. Due to the newly developed scale, the factor loadings of the eleven items and the reliability of each factor were presented in the results section.

**Table 2**

*Survey Developed to Measure Parent Coaching Strategies to Children's Failure and Descriptives of Each Strategy*

Questionnaire Prompts	Strategies	Mean (SD)	Min	Max
Scenario 1(Extra-curriculum): Think of an extra-curricular activity that your child is learning or is interested in enrolling in (such as music, art, sports, etc.). Your child failed to advance to a higher level after a 3rd attempt. They are very upset and don't want to continue because they are afraid that they will fail again. I will ...	Hug my child and be emotionally available	4.50 (.74)	2	5
	Let my child know it's OK to fail at this attempt	3.76 (.85)	1.33	5
	Encourage my child that they are doing great already	4.06 (.74)	1.67	5
	Tell my child that this is what it is and really not a big deal	2.00 (1.00)	1	5
	Feel upset that my child is more emotional than they should be	2.77 (1.02)	1	5
Scenario 2 (Reading): One day, your child cries to you and says they don't want to continue the school reading challenge because their best friend is much more advanced in the reading activity than them. I will...	Provide some strategies and figure out a different way together	4.14 (.73)	1.33	5
	Help my child see the value and fun of learning this activity	4.15 (.62)	2.33	5
	Educate my child that persistence is the key to success, and they cannot give up	3.80 (.88)	1.33	5
	Let my child take a break	3.21 (.84)	1	5
Scenario 3 (Math): Your child is working on a school math project and they are very frustrated because they cannot figure out the equations (or numbers).	See what else my child is good at and try something new	3.07 (.85)	1.33	5
	Let my child experience it and figure it out by themselves	2.71 (.96)	1	5

*Note.* The descriptives were the average scores across three scenarios.

### *Child Mastery Motivation*

Parents reported their children's Dimensions of Mastery Questionnaire (DMQ short version) (Morgan et al., 2019). Parents rated the 25 items on a 1 (Very Unlikely) to 6 (Very Likely) scale. DMQ constructed to measure four dimensions of children's mastery motivation: Object-Oriented Persistence (9 items; e.g., "Works for a long time trying to do something hard";  $\alpha = 0.86$  with the current sample), Mastery Pleasure (6 items; e.g., "Gets excited when he or she figures something out";  $\alpha = 0.86$ ), General Competence (5 items; e.g., "Learns new things quickly";  $\alpha = 0.74$ ), and Negative Reaction to Failure (5 items; e.g., "Gets frustrated when he or she does not do well at something";  $\alpha = 0.86$ ). This measure has been validated with preschool- and school-aged children (Morgan et al., 2019). The mean score of each subscale was calculated.

### *Parent Failure Mindset*

Parents' attitudes about failure were assessed through the Failure Mindset Scale (Haimovitz & Dweck, 2016). Participants rated 6 items on a 5-point scale (1 = *Not at all like me* to 5 = *Very much like me*),

including positive attitudes items (e.g., "I believe experiencing failure facilitates my learning and growth") and three reverse-coded debilitating failure attitudes items (e.g., "I believe the effects of failure are negative and should be avoided"). The average score across 6 items was calculated, with higher scores indicating a more growth-oriented mindset about failure ( $\alpha = .71$ ).

### ***Parents' Attitudes towards Children's Failure***

The survey of parents' attitudes toward children's failure was adapted from Haimovitz and Dweck's (2016) failure mindset measure. Each item was rewritten to describe children's failure. For example, "I believe experiencing failure facilitates my child's learning and growth." Or, "I believe the effects of failure are negative for my child and should be avoided." A higher total mean score indicated primary caregivers' positive attitudes towards children's failure ( $\alpha = .72$ ).

### ***Parent Grit***

Parents' grit was assessed using the 8-item Short Grit Scale (Grit-S) (Duckworth & Quinn, 2009), which measures trait-level perseverance and passion for long-term goals on a 5-point scale (1 = *Not at all like me* to 5 = *Very much like me*; e.g., "I often set a goal but later choose to pursue a different one," or "I finish whatever I begin"). The total score was the average score of the 8 items ( $\alpha = .85$ ). A higher score indicated higher grit.

### ***Parent Perfectionism***

Parents' perfectionism was assessed through the Frost Multidimensional Perfectionism Scale-Brief (F-MPS-Brief) (Burgess et al., 2016). Parents rated their agreement with eight statements on a 5-point scale (1 = *Strongly Disagree* to 5 = *Strongly Agree*; e.g., "If I fail at work/school, I am a failure as a person."). Higher total mean scores indicated parents' higher perfectionism ( $\alpha = .81$ ).

### ***Child Effortful Control***

Children's effortful control was assessed using the Effortful Control subscale from the Children's Behavior Questionnaire (CBQ) (Putnam & Rothbart, 2006). Parents rated how well 12 statements described their child's typical behavior over the past six months using a 7-point scale (1 = *extremely untrue of your child* to 7 = *extremely true of your child*, with an additional option for "not applicable"; e.g., "When drawing or coloring in a book, shows strong concentration,"). A higher average score indicated greater effortful control capacity ( $\alpha = .76$ ).

### ***Demographic Covariates***

The primary caregiver reported on household income, child age (calculated with the child's birthdate and the date the survey was completed), and child sex (0 = male, 1 = female).

### **Analysis Plan**

First, a factor analysis was conducted in SPSS v. 29 to assess whether there were underlying and distinct theoretical structures within the parent's Coaching Strategies reacting to Children's Failure (CSCF) measure. Then, the first multiple regression in Mplus v. 8.6 using a maximum likelihood estimator investigated associations between individual CSCF aspects and child mastery motivation. The second multiple regression examined the associations between parents' characteristics (i.e., parent attitudes towards their child's and their own failure, grit, and perfectionism), children's effortful control, and covariates (i.e., family income, child sex, and child age), with the individual CSCF aspects. The dataset and analysis scripts used in this study have been archived at the Open Science Framework: <https://doi.org/10.17605/OSF.IO/JTZ2P>.

## **Results**

Table 3 presents descriptive statistics and correlations across variables, including the later calculated three aspects of CSCF according to the following factor analysis results. All variables met normality assumptions. The bivariate correlations showed that family income was positively correlated to parental

grit, perfectionism, and child mastery pleasure. Girls showed more effortful control, mastery pleasure, and general competence than boys. Child age was not correlated with parents' coaching strategies.

**Table 3**  
Correlations and Descriptive Statistics for all Study Variables

	1	2	3	4	5	6	7	
<b>Covariates</b>								
1. Income	--							
2. Child Sex	-.01	--						
3. Child Age	.03	.15	--					
<b>Parents' Coaching Strategies</b>								
4. Emotion-Coaching Strategies	.08	-.01	.03	--				
5. Persistence Strategies	-.03	.09	.09	.49***	--			
6. Passive/Minimization Strategies	-.22*	.01	-.07	.06	.05	--		
<b>Child Mastery Motivation Dimensions</b>								
7. Object-Oriented Persistence	-.02	.13	.14	.14	.25**	-.01	--	
8. Mastery Pleasure	.19*	.18*	.10	.63***	.42***	-.25**	.31***	
9. General Competence	.13	.23*	.16	.30***	.30***	-.19*	.50***	
10. Negative Reactions to Failures	.05	-.05	.05	-.12	-.03	.24**	-.40***	
<b>Parents' and Children's Characteristics</b>								
11. Parent Attitudes toward Child's Failure	.05	.15	.12	.11	.20*	-.04	.30***	
12. Parent Failure Mindset	.05	.09	.19*	.07	.33***	-.01	.33***	
13. Parent Grit	.19*	.13	-.06	.26**	.27**	-.15*	.25**	
14. Parent Perfectionism	.19*	-.04	-.06	-.12	.05	.12	-.26**	
15. Child Effortful Control	-.08	.33***	.08	.21*	.26**	.05	.49***	
N	143	133	117	138	138	138	137	
Mean	5.44	.55	6.02	4.11	4.03	2.75	4.19	
(SD)	(1.85)	(.50)	(1.05)	(.63)	(.58)	(.63)	(.79)	
Min/Max	1/ 8	0/ 1	4/ 7.9	2/ 5	2.1/ 5	1.4/ 4.3	1.7/ 6	
Skew/	-.43/	-.20/	.04/	-.88/	-.49/	.14/	-.64/	
Kurtosis	-.65	-.20	-.91	.54	.17	-.44	.91	
<i>Continued...</i>								
	8	9	10	11	12	13	14	15
8	--							
9	.53***	--						
10	-.21*	-.40***	--					
11	.15	.31***	-.13	--				
12	.24**	.31***	-.13	.59***	--			
13	.37***	.33***	-.43***	.01	.14*	--		
14	-.01	-.015	.31***	-.16	-.17*	-.13	--	
15	.28**	.40***	-.08	.37***	.37***	.07	-.08	--
N	137	137	136	140	142	143	139	136
Mean	5.30	4.65	3.61	3.88	3.80	3.45	3.00	5.23
(SD)	(.74)	(.81)	(1.09)	(.62)	(.54)	(.68)	(.67)	(.87)
Min/Max	2.5/ 6	2/ 6	1/ 5.8	2/ 5	2.3/ 5	1.6/ 4.9	1.3/ 5	3/ 6.9
Skew/	-1.3/	-.59/	-.58/	-.22/	-.07/	-.36/	-.04/	-.58/
Kurtosis	1.58	.46	-.02	-.01	.24	-.25	.21	-.22

Note. a. Child sex (designated at birth), 0 = boy and 1 = girl; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

### Factor Analysis: Parents' Coaching Strategies

The exploratory factor analysis was conducted using Principal Axis Factoring syntax in SPSS as the extraction method and varimax rotation to aid in factor interpretation. We examined scree plots and eigenvalues greater than one to determine the number of factors to retain. The pattern matrix revealed clear factor loadings of a three-factor solution, with items loading above the conventional cutoff of 0.40 on their respective factors and minimal cross-loadings. Factor 1, labeled *Emotion-Coaching Strategies*, reflected parents' emotional availability, validated their emotional expressions, and soothing. Factor 2, labeled *Persistence Strategies*, captured parents' problem-solving-oriented approach, encouragement of persistence, and emphasis on the intrinsic value of learning this skill or activity. Factor 3 was loaded with five items

that captured parents' permissive and passive approaches, as well as their minimization of children's frustrated feelings toward failure, which were named *Passive/Minimization Strategies*. Each factor accounted for a significant proportion of the variance in the CSCF items. Eigenvalues and factor loadings were presented in Table 4. Together, these factors accounted for approximately 49% of the total variance in the CSCF items.

The reliability of each factor was evaluated using Cronbach's alpha; the reliabilities of the three factors ranged from .67 to .75, indicating good reliability within each factor. The average scores across items loaded in each CSCF factor were calculated and used in the following multiple regression analyses to explore their associations with children's mastery motivation and other parent and child traits.

**Table 4**  
*Factor Analysis Results*

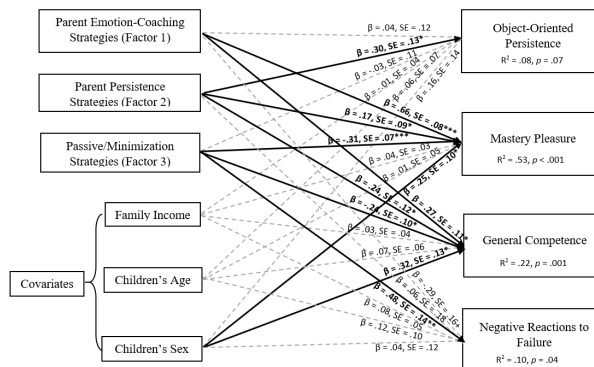
Item	Factor 1	Factor 2	Factor 3
Hug my child and be emotionally available	.746		
Let my child know it's OK to fail at this attempt	.723		
Encourage my child that they are doing great already	.624		
Provide some strategies and figure out a different way together.*	.550	.479	
Help my child to see the value and fun of learning this activity.		.557	
Educate my child that persistence is the key to success, and they cannot give up.		.619	
Let my child take a break			.520
See what else my child is good at and try something new			.684
Let my child experience it and figure it out by themselves.			.642
Tell my child that this is what it is and really not a big deal.			.721
Feel upset that my child is more emotional than they should be.			.365
Eigenvalues	3.26	2.37	1.28
Cronbach's alpha	.75	.67	.70

Note. \* The item was double-loaded but was categorized as a persistence strategy due to the theoretical conceptualization. Factor 1 = Emotion-coaching Strategies; Factor 2 = Persistence Strategies; Factor 3 = Permissive /Minimization Strategies.

**Parents' Coaching Strategies and Children's Mastery Motivation**

The first multiple regression results were presented in Figure 1. *Emotion-Coaching Strategies* were positively related to children's mastery pleasure and general competence ( $\beta$ s = .66 and .27, SE = .08 and .11,  $p$ s < .001 and = .02, respectively). *Persistence Strategies* were positively related to children's object-oriented persistence ( $\beta$  = .30, SE = .13,  $p$  = .02), mastery pleasure ( $\beta$  = .17, SE = .09,  $p$  = .05), and general competence ( $\beta$  = .24, SE = .12,  $p$  = .05). In contrast, *Permissive/Minimization Strategies* were negatively related to children's mastery pleasure ( $\beta$  = -.31, SE = .07,  $p$  < .001) and general competence ( $\beta$  = -.24, SE = .10,  $p$  = .02), but positively related to children's negative reactions to failure ( $\beta$  = .48, SE = .14,  $p$  = .001). The overall effect sizes for the three strategies ranged from .08 to .53 (Figure 1).

**Figure 1**  
*Multiple Regression with CSCF Predicting Child Mastery Motivation*

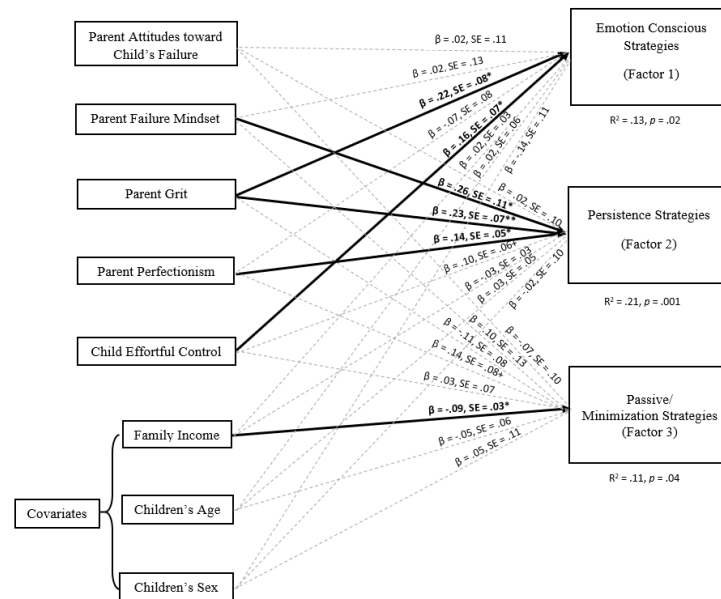


Note. Child sex, 0 = boy and 1 = girl; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ ;  $R^2$ , the overall effect size.

### Individual Differences in Predicting Parents' Strategies

The second multiple regression examined the relations between parents' and children's characteristics and parents' coaching strategies (Figure 2). Results showed significant positive relations between parent grit and child effortful control and *Emotion-Coaching Strategies* ( $\beta$ s = .22 and .16, SE = .08 and .07,  $p$ s = .01 and .02, respectively). *Persistence Strategies* were significantly and positively predicted by parent failure mindset ( $\beta = .26$ , SE = .11,  $p = .02$ ) and parent grit ( $\beta = .23$ , SE = .07,  $p = .001$ ), as well as parents' perfectionism ( $\beta = .14$ , SE = .07,  $p = .05$ ). Finally, *Passive/Minimization Strategies* were solely significantly predicted by family income in the negative direction ( $\beta = -.09$ , SE = .03,  $p = .01$ ). All other associations were non-significant at the  $p > .05$  level. The overall effect sizes for the three strategies ranged from .11 to .21 (Figure 2).

**Figure 2**  
Multiple Regression with Parent and Child Characteristics Predicting CSCF



Note. Child sex, 0 = boy and 1 = girl; +  $p < .10$ ; \*  $p < .05$ ; \*\*  $p < .01$ ; R<sup>2</sup>, the overall effect size.

### Conclusion and Discussion

While failure resilience and perseverance toward goals begin to emerge during the preschool years (Sutter et al., 2022), research on these constructs hasn't garnered scholarly attention until adolescence. This study advances the existing literature on the socialization of failure resilience in young children by examining parents' various coaching strategies in helping their children handle failure in learning contexts. The factor analysis identified three types of parents' coaching strategies: *Emotion-Coaching strategies*, *Persistence Strategies*, and *Passive/Minimization Strategies*. Consistent with the hypothesis, effective parental strategies were multifaceted, encompassing both emotion-coaching and persistence-focused approaches. These strategies were positively associated with various dimensions of children's mastery motivation. However, different from our hypothesis, all five items loaded onto a single factor—*Passive/Minimization Strategies*—suggesting that parents who are emotion-dismissing also tend to withdraw when their children encounter failure. Parents' *Passive/Minimization Strategies* were associated with children's less pleasure in success and lower competence, as well as more negative reactions to failures. Given the cross-sectional nature of this study, the underlying mechanisms driving these associations remain unclear. One possibility is that parents who provide emotional support and persistence-oriented guidance perceive their children as resilient during challenges. Alternatively, children who struggle with failure may elicit more passive and minimizing responses from their parents.

Additionally, this study highlights individual differences in parental coaching strategies based on both parental and child characteristics. Notably, parental *grit* emerged as a strong predictor of positive coaching strategies. Previous studies consistently show that *grit* predicts an individual's achievements, income, and psychological well-being (Duckworth & Quinn, 2009), but few examined its linkage to parenting. Findings from this study suggest that parents with greater passion and perseverance toward their own goals are more patient with their children's failure, more likely to provide solutions, and more inclined to encourage persistence. In addition, parents' own failure mindset was also associated with parents' persistence strategies. Overall, the results suggested that parents' positive attitudes toward failure and *grit* are good indicators of their positive coaching strategies. Future research should encourage these characteristics among parents, in order to examine the potential effects on their children's failure resilience.

Surprisingly, we didn't find evidence that parents' attitudes toward *children's* failure predicted coaching strategies. It is possible that parents' own failure mindset and *grit* carry more weight than what parents "try to" deliver to their children or what they believe they "should do" in the role of parents. Some media use studies and racial socialization studies echoed this finding, showing that parents' true selves (i.e., their own implicit values) define who they are as parents more than explicit messaging, or the parent that they would "like" to be (e.g., Castelli et al., 2008). More research is needed on transmission mechanisms in this area.

Interestingly, the study suggested that parents' perfectionism plays a mixed role in children's failure-resilience socialization. First, parents' perfectionist personality was *positively* related to parents' *persistence strategies*. Perfectionist parents may be intolerant of children's failure, prompting them to promote success by encouraging children's persistence and providing children with problem-solving strategies. However, perfectionism cannot be simply viewed as an adaptive personality in child failure resilience socialization because correlational results also link perfectionism to parents' debilitating failure mindset. That is, perfectionist parents tend to see failure as an obstacle to learning and something to be avoided. Consistently, prior research showed that perfectionism, a personality of pursuing unrealistic high achievement, is a multidimensional personal trait that has both adaptive and maladaptive components to achievement and psychological well-being (e.g., Seong & Chang, 2021). Our work suggests that the positive aspects of perfectionism (seeking improvement) are embraced while negative aspects (intolerance of any mistakes) are avoided.

A key strength of multiple regression is to identify the relative strength of relations of multiple predictors. The results indicated that different parent, child, and family predictors mattered for each coaching strategy. Specifically, parents' emotion-coaching strategies were mainly predicted by the child's effortful control, which is aligned with the evocative gene-environment effects perspective (Klahr et al., 2013); that is, self-regulated children elicit positive reactions from parents. Additionally, parents' persistence strategies were mostly predicted by parents' personality traits, whereas parents' negative strategies were mostly driven by family income, possibly due to increased parenting stress from economic hardship (Conger et al., 2010). These findings highlight the importance of fostering positive parenting behaviors and improving children's failure resilience by enhancing both parents' attitudes and children's effortful control.

Although this study provides pioneering insights into measuring and identifying predictors of parents' coaching strategies in failure resilience socialization, several limitations should be noted. First, the cross-sectional data limited the ability of causal inference. Longitudinal data is needed to investigate how family predictors determine parents' coaching strategies over time and, in turn, influence children's later failure resilience. Second, our results relied on the primary caregiver's report. Future studies should provide multi-reporter, multi-method data to enhance the validity of the results. Third, the representativeness of the sample is limited. Caution is needed in generalizing the current results of the most White, married sample to other groups. Further psychometric evaluation is also necessary to strengthen the validity of this newly developed CSCF measure.

Despite these limitations, this study serves as an important first step in understanding how parents coach their children through failure. The findings suggested that parents' effective coaching strategies are associated with young children's high mastery motivation. By identifying the individual differences on the key parent and child characteristics—including parental grit, perfectionism, and children's effortful control—this research highlights the complex interplay between parental characteristics, child traits, and family context in failure resilience socialization, laying the groundwork for future research and intervention programs aimed at fostering children's failure resilience from an early age.

## Declarations

### *Authors' Declarations*

**Acknowledgements:** The authors wish to thank all the caregivers who participated in this study.

**Authors' contributions:** All authors made equal contributions to the conceptualization, methodology, and investigation. Wen Wang and Ashley Fraser took the lead in formal analysis and the first draft. All authors contributed substantially to writing and revision, and approved the final manuscript.

**Competing interests:** The authors declare that they have no competing interests.

**Funding:** The research leading to these results received funding from the National Science Foundation under Grant No. CMMI-1750316 and OIA-2119691. The findings and opinions expressed in this article are those of the authors only and do not necessarily reflect the views of the sponsors.

**Ethics approval and consent to participate:** This study was performed in line with the principles of the Declaration of Helsinki. Approval was granted by the Ethics Committee of Blinded Review (North Dakota State University Institutional Review Board, No. IRB0004799). Informed consent was obtained from all individual participants included in the study. All data and code supporting the findings of this study are archived and openly available at the Open Science Framework: <https://doi.org/10.17605/OSF.IO/JT22P>.

### *Publisher's Declarations*

**Editorial Acknowledgement:** The editorial process of this article was completed under the editorship of Dr. Adrijana Visnjic Jevtic through a double-blind peer review with external reviewers.

**Publisher's Note:** Journal of Childhood, Education & Society remains neutral with regard to jurisdictional claims in published maps and institutional affiliation.

## References

- Balk, D. (1983). Learned helplessness: A model to understand and overcome a child's extreme reaction to failure. *Journal of School Health*, 53(6), 365–370. <https://doi.org/10.1111/j.1746-1561.1983.tb05367.x>
- Barrett, K. C., & Morgan, G. A. (2018). Mastery motivation: Retrospect, present, and future directions. In A. Elliot (Ed.), *Advances in motivation science*: 5 (pp. 1–39). Elsevier.
- Barrett, K. C., Morgan, G. A., & Maslin-Cole, C. (1993). Three studies on the development of mastery motivation in infancy and toddlerhood. In D. J. Messer (Ed.), *Mastery motivation in early childhood: Development, measurement and social processes* (pp. 83–108). Routledge.
- Belsky, J. (1984). The determinants of parenting: A process model. *Child Development*, 55(1), 83–96. <https://doi.org/10.1111/j.1467-8624.1984.tb00275.x>
- Bornstein, M. H., Putnick, D. L., & Suwalsky, J. T. D. (2018). Parenting cognitions → parenting practices → child adjustment? The standard model. *Development and Psychopathology*, 30(2), 399–416. <https://doi.org/10.1017/S0954579417000931>
- Burgess, A. M., Frost, R. O., & DiBartolo, P. M. (2016). Development and validation of the Frost Multidimensional Perfectionism Scale-Brief. *Journal of Psychoeducational Assessment*, 34(7), 620–633. <https://doi.org/10.1177/0734282916651359>
- Calo, M., Judd, B., Chipchase, L., Blackstock, F., & Peiris, C. L. (2022). Grit, resilience, mindset, and academic success in physical therapist students: A cross-sectional, multicenter study. *Physical Therapy*, 102(6), pzac038. <https://doi.org/10.1093/ptj/pzac038>
- Castelli, L., De Dea, C., & Nesdale, D. (2008). Learning social attitudes: Children's sensitivity to the nonverbal behaviors of adult models during interracial interactions. *Personality and Social Psychology Bulletin*, 34(11), 1504–1513. <https://doi.org/10.1177/0146167208322769>
- Ching, B. H. H., Li, X. F., & Chen, T. T. (2023). Longitudinal Links between parental failure mindsets, helicopter parenting, and fixed mindset of intelligence in adolescents. *Journal of Youth and Adolescence*, 52(10), 2196–2213. <https://doi.org/10.1007/s10964-023-01815-5>
- Conger, R. D., Conger, K. J., & Martin, M. J. (2010). Socioeconomic status, family processes, and individual development. *Journal of*

- Marriage and Family*, 72(3), 685-704. <https://doi.org/10.1111/j.1741-3737.2010.00725.x>
- Duckworth, A. L., & Quinn, P. D. (2009). Development and validation of the Short Grit Scale (GRIT-S). *Journal of Personality Assessment*, 91(2), 166-174. <https://doi.org/10.1080/00223890802634290>
- Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology*, 92(6), 1087 - 1101. <https://doi.org/10.1037/0022-3514.92.6.1087>
- Dunn, J., Cormier, D., Kono, S., Dunn, J. C., & Rumbold, J. (2021). Perfectionism and grit in competitive sport. *Journal of Sport Behavior*, 44(2). URI: <https://shura.shu.ac.uk/id/eprint/28514>
- Dweck, C. (2016). What having a “growth mindset” actually means. *Harvard Business Review*, 13(2), 2–5.
- Eskreis-Winkler, L., & Fishbach, A. (2019). Not learning from failure—The greatest failure of all. *Psychological Science*, 30(12), 1733-1744. <https://doi.org/10.1177/0956797619881133>
- Frogley, W. J., King, G. L., & Westrupp, E. M. (2023). Profiles of parent emotion socialization: Longitudinal associations with child emotional outcomes. *Mental Health & Prevention*, 30, 200274. <https://doi.org/10.1016/j.mhp.2023.200274>
- Gilmore, L., Cuskelly, M., & Purdie, N. (2003). Mastery motivation: Stability and predictive validity from ages two to eight. *Early Education and Development*, 14 (4), 411–424. [https://doi.org/10.1207/s15566935eed1404\\_2](https://doi.org/10.1207/s15566935eed1404_2)
- Gottman, J. M., Katz, L. F., & Hooven, C. (1996). Parental meta-emotion philosophy and the emotional life of families: Theoretical models and preliminary data. *Journal of Family Psychology*, 10(3), 243–268. <https://doi.org/10.1037/0893-3200.10.3.243>
- Haimovitz, K., & Dweck, C. S. (2016). Parents' views of failure predict children's fixed and growth intelligence mind-sets. *Psychological Science*, 27(6), 859–869. <https://doi.org/10.1177/0956797616639727>
- He, J., Guo, D., Zhang, Q., Liu, Y., Lou, L., & Shen, M. (2016). The influence of goal value on persistence in exuberant Chinese children. *Social Development*, 25(2), 256-267. <https://doi.org/10.1111/sode.12149>
- Johnson, J., Panagioti, M., Bass, J., Ramsey, L., & Harrison, R. (2017). Resilience to emotional distress in response to failure, error or mistakes: A systematic review. *Clinical Psychology Review*, 52, 19–42. <https://doi.org/10.1016/j.cpr.2016.11.007>
- Klahr, A. M., Thomas, K. M., Hopwood, C. J., Klump, K. L., & Burt, S. A. (2013). Evocative gene–environment correlation in the mother–child relationship: A twin study of interpersonal processes. *Development and Psychopathology*, 25(1), 105-118. <https://doi.org/10.1017/S0954579412000934>
- Krohne, H. W., Pieper, M., Knoll, N., & Breimer, N. (2002). The cognitive regulation of emotions: The role of success versus failure experience and coping dispositions. *Cognition and Emotion*, 16(2), 217–243. <https://doi.org/10.1080/02699930143000301>
- Lee, M. A., Schoppe-Sullivan, S. J., & Dush, C. M. K. (2012). Parenting perfectionism and parental adjustment. *Personality and Individual Differences*, 52(3), 454-457. <https://doi.org/10.1016/j.paid.2011.10.047>
- Lee, W. W. S. (2017). Relationships among grit, academic performance, perceived academic failure, and stress in associate degree students. *Journal of Adolescence*, 60(1), 148–152. <https://doi.org/10.1016/j.adolescence.2017.08.006>
- Lilley, C., Sirois, F., & Rowse, G. (2020). A meta-analysis of parental multidimensional perfectionism and child psychological outcomes. *Personality and Individual Differences*, 162, 110015. <https://doi.org/10.1016/j.paid.2020.110015>
- Liu, G., Su, Q., & Han, Y. (2023). The power of trust: How does parents' failure mindset affect children's intelligence mindset? *Personality and Individual Differences*, 206, 112139. <https://doi.org/10.1016/j.paid.2023.112139>
- Lucca, K., Horton, R., & Sommerville, J. A. (2019). Keep trying!: Parental language predicts infants' persistence. *Cognition*, 193, 104025. <https://doi.org/10.1016/j.cognition.2019.104025>
- Mokrova, I. L., O'Brien, M., Calkins, S. D., Leerkes, E. M., & Marcovitch, S. (2012). Links between family social status and preschoolers' persistence: The role of maternal values and quality of parenting. *Infant and Child Development*, 21(6), 617-633. <https://doi.org/10.1002/icd.1761>
- Morgan, G. A., Wang, J., Barrett, K. C., Liao, H. F., Wang, P. J., Huang, S. Y., & Józsa, K. (2019). The Revised Dimensions of Mastery Questionnaire (DMQ 18): A manual and forms for its use and scoring. [https://www.researchgate.net/profile/George-Morgan-4/publication/326107138\\_The\\_Revised\\_Dimensions\\_of\\_Mastery\\_Questionnaire\\_DMQ\\_18/links/5d9f92bf299bf116fe9c7f02/THe-Revised-Dimensions-of-Mastery-Questionnaire-DMQ-18.pdf](https://www.researchgate.net/profile/George-Morgan-4/publication/326107138_The_Revised_Dimensions_of_Mastery_Questionnaire_DMQ_18/links/5d9f92bf299bf116fe9c7f02/THe-Revised-Dimensions-of-Mastery-Questionnaire-DMQ-18.pdf)
- Penzel, I. B., Persich, M. R., Boyd, R. L., & Robinson, M. D. (2017). Linguistic evidence for the failure mindset as a predictor of life span longevity. *Annals of Behavioral Medicine*, 51(3), 348-355. <https://doi.org/10.1007/s12160-016-9857-x>
- Pomerantz, E. M., Grolnick, W. S., & Price, C. E. (2005). The role of parents in how children approach achievement. In A. J. Elliot & C. S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 259-278). Guilford Press.
- Putnam, S. P., & Rothbart, M. K. (2006). Development of short and very short forms of the Children's Behavior Questionnaire. *Journal of Personality Assessment*, 87(1), 102-112. [https://doi.org/10.1207/s15327752jpa8701\\_09](https://doi.org/10.1207/s15327752jpa8701_09)
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-

- being. *American Psychologist*, 55(1), 68 - 78. <https://doi.org/10.1037/0003-066X.55.1.68>
- Seong, H., & Chang, E. (2021). Profiles of perfectionism, achievement emotions, and academic burnout in South Korean adolescents: Testing the 2× 2 model of perfectionism. *Learning and Individual Differences*, 90, 102045. <https://doi.org/10.1016/j.lindif.2021.102045>
- Skinner, E. A., & Wellborn, J. G. (1994). Coping during childhood and adolescence: A motivational perspective. In D. Featherman, R. Lerner & M. Perlmutter (Eds.), *Life-span development and behavior* (Vol. 12, pp. 91–133). Erlbaum.
- Su, A., & He, G. (2024). The effects of parents' failure beliefs on children's math achievement: children's math self-efficacy, responses to failure and intelligence mindset as mediators. *European Journal of Psychology of Education*, 39(3), 3011-3028. <https://doi.org/10.1007/s10212-024-00833-6>
- Sutter, M., Untertrifaller, A., & Zoller, C. (2022). Grit increases strongly in early childhood and is related to parental background. *Scientific Reports*, 12(1), 3561. <https://doi.org/10.1038/s41598-022-07542-4>
- Tao, V. Y. K., Li, Y., & Wu, A. M. S. (2022). Do not despise failures: Students' failure mindset, perception of parents' failure mindset, and implicit theory of intelligence. *European Journal of Psychology of Education*, 37(2), 375 - 389. <https://doi.org/10.1007/s10212-020-00524-y>
- Tiberio, S. S., Capaldi, D. M., Kerr, D. C. R., Bertrand, M., Pears, K. C., & Owen, L. (2016). Parenting and the development of effortful control from early childhood to early adolescence: A transactional developmental model. *Development and Psychopathology*, 28(3), 837–853. <https://doi.org/10.1017/S0954579416000341>
- Wang, W., Spinrad, T. L., & Eisenberg, N. (2023). The development and prediction of young children's behavioral mastery motivation. *Early Childhood Research Quarterly*, 62, 239-250. <https://doi.org/10.1016/j.ecresq.2022.09.001>
- Wilder, S. (2014). Effects of parental involvement on academic achievement: A meta-synthesis. *Educational Review*, 66(3), 377-397. <http://dx.doi.org/10.1080/00131911.2013.780009>
- Wilson, B. J., Petaja, H., Yun, J., King, K., Berg, J., Kremmel, L., & Cook, D. (2014). Parental emotion coaching: Associations with self-regulation in aggressive/rejected and low aggressive/popular children. *Child & Family Behavior Therapy*, 36(2), 81-106. <https://doi.org/10.1080/07317107.2014.910731>
- Wittig, S. M., & Rodriguez, C. M. (2019). Emerging behavior problems: Bidirectional relations between maternal and paternal parenting styles with infant temperament. *Developmental Psychology*, 55(6), 1199-1214. <https://doi.10.1037/dev0000707>
- Ziegert, D. I., Kistner, J. A., Castro, R., & Robertson, B. (2001). Longitudinal study of young children's responses to challenging achievement situations. *Child Development*, 72(2), 609–624. <https://doi.org/10.1111/1467-8624.00300>

# The impact of parent-teacher collaboration on kindergarteners' social-emotional learning

Jiahui Li<sup>1</sup>, Barbara Elena M. Lagos<sup>2</sup>

**Abstract:** This study explores the role of parent-teacher collaboration on the social and emotional learning of kindergarten children. The background shows that home-school collaboration is crucial for children's early SEL, but the mechanisms and challenges in non-Western contexts have not been fully revealed. The study used interpretive phenomenological analysis to conduct semi-structured interviews with 8 parents and 10 teachers in a kindergarten in Hebei Province, China. The results showed that parent-teacher collaboration improved children's self-efficacy, emotion regulation and interpersonal communication skills through two-way positive feedback and contextualized collaborative guidance, but differences in educational concepts, communication barriers and trust issues restricted the effectiveness of the collaboration. The study recommends building a structured collaboration framework to systematically support the development of children's social and emotional learning and provide empirical reference for home-school collaboration in early education.

## Article History

Received: 14 June 2025

Accepted: 19 December 2025

## Keywords

Parent-teacher collaboration; Kindergarten children; Social-emotional learning; Interpretive phenomenological analysis; Communication barriers

## Introduction

Social-Emotional Learning (SEL) in early childhood, encompassing self-awareness, emotional regulation, and interpersonal skills, is critical for lifelong well-being (Collaborative for Academic, Social, and Emotional Learning [CASEL], n.d.). The studies show that high SEL skills in emotional regulation and self-awareness are related to better peer relationships and performance in school. Alzahrani et al. (2019) found out that high SEL children experience more desirable contacts with their peers and Jones et al. (2015) established that SEL boosts concentration and classroom habits, which result in academic achievement. The primary source of influence is the parents and teachers in which case the former provides emotional safety and the latter increases socialization (Maia et al., 2025; Powell et al., 2010). Parent-teacher collaboration (PTC) has been regarded as a very important aspect of the SEL, yet its dynamics in non-Western countries like China is not adequately researched (Ren & Pope Edwards, 2016).

To deepen understanding of how SEL develops, it is essential to examine how children acquire and apply these skills. By definition, SEL is the process through which children learn and use knowledge, attitudes, and abilities to manage emotions, set and achieve positive goals, show empathy, build positive relationships, and make responsible choices (Durlak et al., 2011). A leading framework for SEL is CASEL's model, which expands on core competencies to include not only self-awareness, emotional regulation (under self-management), and interpersonal skills (under relationship skills) but also social awareness and responsible decision-making (CASEL, n.d.). When these competencies are nurtured collectively, they support holistic child development—reinforcing the academic, peer, and wellbeing outcomes highlighted earlier (CASEL, n.d.).

The effectiveness of SEL programs has been recently confirmed by the latest research that showed it has an influence on the many areas of child development around the world. The findings of Cipriano et al. (2023) confirm the vast success of SEL programs and show that in 53 countries, there were significant

<sup>1</sup> Saint Louis University, School of Advanced Studies, Teacher Education Programs, Baguio City, Philippines, e-mail: [fairy5lala@gmail.com](mailto:fairy5lala@gmail.com), ORCID: <https://orcid.org/0009-0003-8255-1921>

<sup>2</sup> Saint Louis University, School of Advanced Studies, Teacher Education Programs, Baguio City, Philippines, e-mail: [bemlagos27@gmail.com](mailto:bemlagos27@gmail.com), ORCID: <https://orcid.org/0009-0008-7971-6699>

shifts in the abilities, school climate, and academic results. According to their study, using 424 research reports, they show how SEL interventions are linked to the enhancement of emotional regulation, positive peer relationships, and academic performance, which facilitates SEL to be one of the elements that contribute to overall development of children. Nevertheless, even with this international achievement, Lim et al. (2024) claim that the gap in culturally responsive SEL practices still exists, especially in non-Western countries such as China. They emphasize that integrating local cultural considerations into SEL programs is necessary to achieve just and equitable outcomes because the traditional Chinese educational values do not take into consideration the contribution made by home-school synergy to the development of SEL (Lim et al., 2024). This disconnect between parent and teacher-based SEL activities points to the importance of future studies on the topic of culturally specific strategies that can be used to improve the outcomes of SEL programs in China.

To explore the broader context of SEL, the social-ecological model developed by Bronfenbrenner highlights the importance of family environment as an important determinant of the developmental results of children including SEL (Bronfenbrenner, 1979). Bronfenbrenner postulates that children and their environments have a bi-directional relationship where the surrounding of children affects their methods of learning, responding and interacting with others (Bronfenbrenner, 1979; Ranson & Urichuk, 2008). The initial years are particularly important to neurological, social-emotional and educational development (Tayler, 2012). In this regard, Griggs and Rollo (2023) emphasize that a positive parent-teacher relationship contributes to these developmental outcomes, as collaborative support during this crucial stage is essential. They further note that strong parent-teacher partnerships can significantly impact such outcomes.

In light of the ecological model, the importance of strong PTC becomes evident. Co-parenting or PTC is a term describing the working association between parents and teachers in the process of children development, especially in early childhood education. It has been found that parent-teacher relationships are positively associated with improved social and emotional outcomes of children (Liu et al., 2024). PTC improves self-regulation, emotional competence, and academic achievement of children because home and school strategies are aligned (Chan et al., 2021). Research in the Chinese context, including Liu et al. (2024), shows that a high parent teacher relationship is negatively related to social behavior problems in children, implying that cooperation has the ability to minimize emotional problems in preschool children. Studies in the Chinese context, in its turn, are prone to be founded upon the quantitative approach which fails to consider the subjective experience and cultural dynamics that characterize such relations. In comparison with it, the studies conducted by Bipath and Oosthuizen (2023) focus on the importance of qualitative research to demonstrate how cultural values affect the effectiveness of parent-teacher relationships. There is a critical gap in the qualitative research that is culturally grounded on the impact that PTC has on SEL in Chinese kindergartens. Although Chinese parents and teachers are willing to collaborate at school, professional assistance is likely to be needed to comprehend how this collaboration can be successful (Chan et al., 2021). This gap justifies the need to carry out a qualitative study on the complex nature of PTC in the Chinese context.

Lang et al. (2020) expanded on Feinberg's concept of co-parenting, stating that the positive influence on the social-emotional adaptation of children is observable due to successful PTC instead of parental involvement. Such collaboration leads to such results as better regulation of emotions and conflict. Parent-teacher relationships with support also boost the social-emotional strengths of children such as empathy, attention and collaboration. Similarly, Campos Cancino and Moreno Mínguez (2020) emphasize the role of family and school in the cognitive, emotional, and social development of children. Their study underlines the helpfulness of the joint strategies between schools and families and the role of such a collaboration as a key stone in developing personal capital of children and their social-emotional skills. They propose teaching intervention that fosters a positive and stable system that facilitates SEL in children.

Bipath and Oosthuizen (2023) had carried out qualitative research to determine the importance of positive parent-teacher interactions to the SEL of young children. The researchers were able to explore the effects of their relationships on the SEL of children by conducting semi-structured interviews with eight

parents and eight teachers. Their results include the value of strategic planning and effective communication in order to have a good parent-teacher relationship and inclusion of parent-teacher relationship-building modules in teacher education programs. Further studies prove that the friendly relationships between the parents and the teachers in the microsystem is helpful to the development of the children (Latif et al., 2023; Suharyat et al., 2023). The positive aspects of parent-teacher relation are always linked to better academic and social results of children (Nurhayati, 2021; Nursa'adah et al., 2022; Rosita et al., 2020). In contrast, SEL studies in China have mainly focused on academic outcomes or family structure (Wang et al., 2022; Wang et al., 2017), with limited attention to how PTC shapes SEL. This indicates a significant cultural and contextual gap in the literature.

At the heart of this difference lies China's unique cultural values—especially respect for authority and collectivism—which have strongly influenced early childhood education in China. Traditionally, Chinese teachers hold high social status, and family-school relationships have often been hierarchical (Li et al., 2019). Nevertheless, with the transformation of China's market economy, these dynamics are shifting: in regions like Hebei (a province with a large rural population) that have undergone market-driven changes, parents are becoming more actively involved in their children's education (Guo et al., 2019). This shift highlights the significance of researching PTC in Chinese contexts, where traditional beliefs are being reshaped by modern influences. For instance, studies have found that parent-teacher interaction in rural China is less common than in developed countries, but when it occurs, it positively impacts academic achievement and reduces anxiety (Li et al., 2019). Meanwhile, urban middle-class parents are increasingly inclined to question teacher authority, which alters the nature of parent-teacher relationships (Guo et al., 2019). This cultural evolution underscores the need to re-examine how collaboration influences child development. While a growing body of literature explores parent-teacher relationships in Chinese cities, in rural-dominant provinces like Hebei, in-depth practices of home-school collaboration—such as how collaborative effects connect to child development—remain understudied. This gap not only reinforces the need for targeted research but also aligns with broader national challenges in PTC.

Specifically, a nationwide study (Wang et al., 2023) notes that current PTC across China lacks practical depth: most collaboration remains superficial (e.g., brief feedback during drop-off/pick-up, online parent group updates) and lacks mechanisms to link PTC to outcomes like SEL—an issue even more pronounced in SEL-focused PTC, where research methods are also limited. This national trend is particularly acute in Hebei's rural preschool context. A study of 20 kindergartens in Cang County, Hebei (Si et al., 2017) identified stark resource inequities: public kindergartens (with better teacher-student ratios of 1:4.6 and basic emotional development support) still rarely engage parents in SEL-related collaboration, while private/unlicensed ones (facing teacher shortages, 1:31 ratios, and unqualified staff) struggle to conduct even basic PTC. In this context, PTC rarely moves beyond logistical coordination, leaving no room to address children's SEL needs. Against this backdrop—combining national PTC limitations and Hebei's rural-specific gaps—this study is guided by the following research question: How does parent-teacher collaboration affect kindergarten children's social emotional learning in the Chinese context? To address this question thoroughly, the study uses interpretive phenomenological analysis to deeply analyze the narratives of parents and teachers in Chinese kindergartens, and aims to make two core contributions:

First, addressing cultural and methodological gaps: While Western quantitative methods dominate SEL research (Yong et al., 2023), this study is grounded in the Chinese cultural context to explore how PTC influences SEL. It examines subjective experiences and cultural dynamics often overlooked in previous research, addressing the so-called “black box of interaction processes”—a concept identified by Nurhayati (2021) and others to describe unobserved interaction mechanisms.

Second, enriching global SEL literature: The findings provide empirical data on the PTC-SEL relationship in non-Western contexts, enhancing the cultural generalizability of other studies—such as the one by Bipath and Oosthuizen (2023). The research also contributes to the broader SEL literature by offering practical suggestions for designing culturally specific SEL programs in Chinese kindergartens. Although SEL is now globally recognized, most research focuses on North America, Europe, and Australia (Ren &

Pope Edwards, 2016; Ren et al., 2020). This study highlights the importance of PTC in facilitating SEL for Chinese kindergarten children.

In addition to filling these identified gaps, this research also holds significant practical value for both educational institutions and families in Chinese society—particularly in advancing SEL and PTC in early childhood education. The study is also informative, as it can help foster emotional resilience, self-awareness, and interpersonal skills in young children by examining the impact of PTC. Given that Chinese educational values prioritize academic achievement over emotional development, the findings demonstrate that SEL needs to be integrated into teaching to support children's balanced, comprehensive growth.

## Method

### Research Design

A qualitative research design was employed in this study to explore the lived experiences and subjective meanings of parents and teachers. Most studies on SEL in Asia rely on quantitative or cross-sectional designs, with qualitative research accounting for less than 7% (Yong et al., 2023). While such studies identify statistical relationships between parent-teacher collaboration on children's SEL outcomes, they often overlook deeper cultural mechanisms—such as the concept of teacher honor and unspoken communication norms—that shape collaborative dynamics. To address these limitations, this study used Interpretative Phenomenological Analysis (IPA)—a choice aligned with the study's aim to fill cultural and methodological gaps (as outlined in the Introduction). IPA provides contextual sensitivity and captures the cultural and relational nuances embedded in parents' and teachers' interactions.

### Research Site and Participants

The study sample was from a kindergarten in Hebei Province, China, which had implemented parent guidance and parent communication practices. Specifically, parent guidance includes teacher-shared targeted educational strategies (e.g., how to help children recognize and relieve emotions, how to cope with separation anxiety), as well as one-on-one discussions with parents about their children's performance and development at kindergarten and at home. Parent communication takes place through daily face-to-face communication between parents and teachers, monthly parent-teacher meetings, and a dedicated WeChat group for real-time updates on children's daily activities, developmental challenges, and achievements. Participants were recruited through purposive sampling. The researcher had an existing collaboration with the kindergarten due to previous training and research activities. With the help of the kindergarten principal, information about the study was shared with eligible teachers and parents via internal communication platforms (e.g., WeChat groups). Those who voluntarily expressed interest in participating were contacted and invited to join the study after providing informed consent. This recruitment strategy ensured that participants had relevant experience with PTC practices. Specifically, this information was obtained during initial communication with the kindergarten principal during the research coordination process. The principal confirmed that the kindergarten had long-standing PTC practices, so the participating teachers and parents generally had experience with collaboration and communication—this aligns with the study's focus on long-term collaboration and SEL development. A total of 18 participants participated in the study, including 8 parents (6 mothers and 2 fathers) of children aged 4-6 years who had participated in the kindergarten's PTC program for at least two years; and 10 teachers (7 full-time educators and 3 teaching assistants) with 3-10 years of experience, representing different classroom roles (e.g., lead teacher, auxiliary teacher). The sample size was guided by data saturation (Guest et al., 2006), and recruitment was terminated when no new codes or themes emerged from consecutive interviews, thereby obtaining a comprehensive data set. For parents, saturation was reached after 8 interviews; for teachers, saturation was reached after 10 interviews.

### Data Collection

Before the interview, participants received a bilingual informed consent form (Chinese/English) detailing the purpose of the study, confidentiality clauses, and the right to withdraw at any time, which

could be signed electronically. Semi-structured interviews (20–30 minutes) were designed based on a priori coding frameworks, with questions constructed around the core concepts of “parent-teacher collaboration (PTC)” and “social and emotional learning (SEL)”. This study used the same set of interview questions for both teachers and parents.

**Table 1**

*Interview Questions for Parents and Teachers*

Domain	Duration	Interview Questions (with Sub-theme)	Corresponding Subcode & Note
PTC domain	10–12 minutes	Collaboration strategy: “Can you give an example of a specific activity that improved your child’s emotion regulation through home-school collaboration?”	collaborative intervention
SEL domain	3–4 minutes (total SEL domain: 12–16 minutes)	Emotion regulation: “What strategies did you and your teacher use together to help your child control anger or frustration?”	emotional coping (mapping)
SEL domain	3–4 minutes (total SEL domain: 12–16 minutes)	Peer interaction: “How does home-school collaboration affect children’s ability to resolve peer conflicts?”	social competence (associated with)
Transition and Summary	1–2 minutes (total: 2–4 minutes)	“Are there other aspects of home-school collaboration that have an important impact on children’s social and emotional learning?”	-

Open-ended questions were used to ensure the completeness of the theme, and the final prompt echoed the prior codes to achieve comprehensive coverage of the data.

### Data Analysis

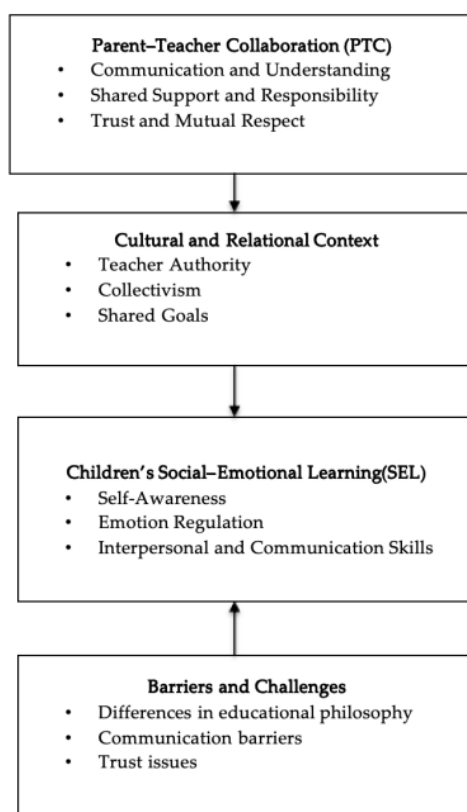
Given that the interviewees were Chinese, all interview recordings were transcribed verbatim and translated into English to ensure analytical consistency. The researchers used the IPA framework of Smith et al. (2009), a six-stage method that focuses on the meaning of individual experiences, including: (1) reading and re-reading, (2) initial noting, (3) developing emergent themes, (4) searching for connections across themes, (5) moving to the next case, (6) looking for patterns across cases. Following Phases 1 and 2, the researchers extracted 126 important statements from interviews with 8 parents and 10 teachers (e.g., “home-school collaboration is a double insurance for children’s growth” by parent A and “family simulated speeches improve children’s expressive fluency” by teacher D). These statements were coded into 32 initial codes (e.g., “positive feedback promotes self-confidence” and “home-school behavior consistency”) through line-by-line analysis. In Phase 3 and Phase 4, codes with similar meanings were further classified into 86 formulated meanings, which were then integrated into 6 higher-level sub-themes (such as “self-awareness development” and “trust crisis”) and 2 core themes: Theme 1: The three-dimensional impact of home-school collaboration on children’s social and emotional learning, Theme 2: Challenges and obstacles in collaboration. Slightly different from the original IPA process, this study simplified the independent report of the fifth stage (cross-case comparison) and directly incorporated the group difference analysis (e.g., parents pay more attention to emotional support, while teachers pay more attention to rule-making) into the theme cluster analysis of the fourth stage to improve the compactness of the results. This adjustment simplifies the analysis process while retaining the depth of explanatory insights, which meets the practical needs of small-scale qualitative research (Smith & Osborn, 2003). Rather

than listing each case one by one, this study incorporates cross-role comparisons into the development of themes. These themes will be interpreted through Bronfenbrenner's ecological system theory, Parsons' role complementarity theory, and Bandura's social learning framework.

**Verification and Rigor:** The reliability of coding was enhanced by reviewing the records. The study used test-retest reliability to test the stability of coding. A random sample of 10% of the interviews (interview texts of 1 teacher) was recorded by the same coder two weeks later. The consistency rate was calculated by comparing the two coding results. The results showed that the coding consistency reached 98.7% (49/50 items were consistent). This result is higher than the common reliability standard in qualitative research (such as 80%, see Johnson & Onwuegbuzie, 2004), indicating that the coding framework has a high stability. To avoid the transfer of interpretation rights, this study did not conduct member checking, which is consistent with the IPA methodology's emphasis on researcher subjectivity (Smith et al., 2009). The researcher further ensured the rigor of the analysis by continuously writing a reflective log to systematically record the theoretical basis of coding decisions and the evolution of subjective interpretation. Ethical and practical constraints such as privacy, sensitivity, and participant involvement also supported the decision not to conduct external feedback. Based on the above data analysis, the conceptual framework of parent-teacher collaboration and children's social-emotional learning is summarised in Figure 1.

**Figure 1**

*Conceptual Framework of Parent-Teacher Collaboration Supporting Children's Social-Emotional Learning*



Note: This framework was inductively derived from IPA of interview data, involving coding of 126 significant statements into 32 initial codes and 6 sub-themes.

### **Ethical Considerations**

This study strictly follows ethical standards. All parent and teacher participants signed an electronic informed consent form to clarify the purpose of the study and the use of data. The interview content was anonymized using "participant category + alphabetical number". The recordings were encrypted and stored in a locked device for researchers to access only. A participant withdrawal mechanism was established, unanalyzed data was deleted immediately, and analyzed data was removed and re-evaluated

to ensure that there was no trace of identity association. At the same time, participants were provided with written confirmation of data deletion. The research procedures were in accordance with the Declaration of Helsinki and local ethical standards, and were supervised and implemented by the Institutional Review Board. The security and transparency of data processing and the rights of participants were prioritized throughout the process.

## Results and Discussion

### Figure 2

#### *Thematic Development Hierarchy*

Core theme 1: Three-dimensional impact of parent-teacher collaboration on children's SEL

└─ Sub-theme 1.1 Cultivate self-awareness

| └─ Initial coding (example):

| | - "Adults' continuous praise strengthens self-confidence"

| | - "Role tasks (such as class librarian) enhance initiative"

| └─ Original data source (example):

| - Teacher A: "In the 'small stall' activity, introverted children actively share toys under encouragement"

| - Parent C: "Family painting exhibitions allow children to call themselves 'little painters' and actively participate in interest classes"

└─ Sub-theme 1.2 Enhance emotion regulation

| └─ Initial coding (example):

| | - "Parent-teacher synchronization strategies (such as calm corners) promote emotion management"

| | - "The use of emotional vocabulary improves recognition ability"

| └─ Original data source (example):

| - Parent A: "After setting up a quiet corner at home, the child will say 'I need to be quiet for a while' when he is angry"

| - Teacher A: "The classroom's 'emotional hut' forms consistent support with the home copy space"

└─ Sub-theme 1.3 Cultivate interpersonal communication skills

| └─ Initial coding (example):

| | - "Imitate adult communication patterns in peer interaction"

| | - "collaborative activities (such as building castles) improve collaboration skills"

| └─ Original data source (example):

| - Teacher A: "In group activities, children imitate the communication tone between teachers and parents"

| - Parent A: "After the teacher arranges cheerful peers to sit at the same table, the child's social participation improves"

Core theme 2: Obstacles and challenges of parent-teacher collaboration

└─ Sub-theme 2.1 Differences in educational concepts

| └─ Initial coding (example):

| | - "Parents prioritize short-term emotional comfort (such as meeting crying needs)"

| | - "Teachers focus on long-term ability training (such as emotional resilience)"

| └─ Source of original data (example):

| - Parent E: "When the child cries, we should satisfy him directly, why guide him?"

| - Teacher I: "Small emotional outbursts are the key to cultivating regulatory ability"

└─ Sub-theme 2.2 Communication barriers

| └─ Initial coding (example):

- | | - "Information is not updated in time (such as delayed WeChat replies)"
- | | - "Family and school have conflicting interpretations of behavior"
- | └ Source of original data (example):
- | - Teacher A: "I sent WeChat to parents, but many people did not reply for several days"
- | - Parent F: "The child has good concentration at home, but the school says he is easily distracted"
- └ Sub-theme 2.3 Trust issues
- | └ Initial coding (example):
- | | - "Parents question the professional ability of teachers (such as recommending books that are not suitable)"
- | | - "Teachers perceive that parents do not approve (such as questioning classroom management)"
- | └ Source of original data (example):
- | - Parent H: "The book recommended by the teacher is too difficult and he doesn't understand the child at all"
- | - Teacher F: "After the biting incident, the parents didn't believe my instructions"

**Table 2**  
*Summary of Emergent Themes*

Theme	Subtheme	Description
1. Impact of Parent-Teacher Collaboration on Children's SEL	1.1 Fostering Self-Awareness	Children developed self-confidence and initiative through consistent adult praise and role responsibility (e.g., class librarian, art activities).
	1.2 Enhancing Emotional Regulation	Children learned to recognize and manage emotions with support from shared home-school strategies such as calm corners and emotional thermometers.
	1.3 Developing Interpersonal Skills	Communication and collaboration improved through joint learning activities, group projects, and modeling of positive social interactions by adults.
2. Barriers to Effective Parent-Teacher Collaboration	2.1 Differences in Educational Philosophy	Parents emphasized immediate emotional comfort, while teachers focused on long-term developmental goals, leading to inconsistent approaches.
	2.2 Communication Barriers	Irregular updates, limited face-to-face communication, and differing interpretations of behavior created gaps in understanding.
	2.3 Trust Issues	Mistrust arose from perceived professional inadequacy or unmet expectations, often triggered by information asymmetry or disagreements.

Note: Table 2 presents the thematic structure derived from the interview data, outlining two major themes and six sub themes concerning the impact and challenges of parent-teacher collaboration on children's SEL.

This study focuses on the core question of "What is the impact of parent-teacher collaboration on the social and emotional learning of kindergarten children?" Through in-depth analysis of interview data from parents and teachers, it is found that the impact of collaboration on children's SEL is mainly reflected in two aspects: the three-dimensional impact of collaboration on children's SEL, and the challenges and problems in collaboration. These two core themes and their sub-themes will be discussed below.

### **The Multi-Dimensional Impact of Parent-Teacher Collaboration on Children's SEL**

#### *Fostering Self-Awareness*

Self-awareness refers to a child's ability to recognize their own emotions, strengths, and identity, which forms the basis of self-confidence and motivation (CASEL, 2003; Denham et al., 1997). This study found that when parents and teachers jointly recognized and praised children's efforts in creative and expressive activities, children showed higher self-esteem, initiative, and a stronger sense of identity.

Feedback from parents and teachers showed that giving children affirmation in specific activities can significantly improve children's self-confidence and participation, and effectively promote the development of self-cognition. Several parents talked about how their children increased their self-confidence with encouragement from school and family. For example:

Parent C: The teacher praised my child's creativity in color. I held a family painting exhibition at home, and my child took the initiative to participate in interest classes. Now he tells everyone he meets: 'I am a little painter.'

Teacher A: I organized a small stall activity to encourage introverted children to share their toys. At first, these children were very shy, but with my constant encouragement, they gradually became confident and later generously showed their toys.

The above cases reflect the synergistic effect of home-school collaboration on the cultivation of children's self-awareness. Parent C and teachers use the linkage model of "school praise + family reinforcement" (such as teachers affirming painting creativity and parents responding with "family painting exhibitions") to enable children to internalize the identity of "little painters" from external recognition, and then actively expand their interests (enroll in interest classes), forming a positive cycle of "external affirmation → self-concept construction → behavioral initiative". Similarly, teacher A's "small stall" activities and continuous encouragement create low-pressure social trial opportunities for introverted children. This positive experience in the school scene (from shyness to generous display) directly reflects the improvement of self-efficacy - children confirm "their ability to participate in social activities" through repeated practice, and finally achieve a breakthrough in self-confidence. Beyond these outcomes, the impact of home-school collaboration on self-awareness can be further contextualized with developmental theories. The cases above demonstrate how such partnerships foster children's self-awareness, which aligns with Erikson's (1963) psychosocial development theory—specifically the "Initiative vs. Guilt" stage. During this phase, children derive meaning from their goals by engaging in activities they perceive as meaningful. This process also embodies CASEL's (n.d.) Environmental Self-Awareness Feedback Loop, where school recognition, family reinforcement, and children's self-perception operate in a recursive relationship. A clear example is the sequence: "Teacher's Stall (school) → Parent's Art Exhibition (family) → Child's participation in interest classes (self-perception)." This loop creates a positive cycle that shapes a confident personality.

These findings align with culturally responsive SEL practices, which emphasize adapting programs to local cultural norms (Lim et al., 2024). This alignment is particularly critical in China, where academic achievement has traditionally taken precedence over self-awareness development (Ren & Pope Edwards, 2016). The home-school collaboration discussed here integrates SEL into this cultural context: it leverages teacher authority and strong parent-teacher relationships to provide consistent feedback. This not only nurtures children's self-awareness but also balances traditional academic priorities with contemporary emotional development needs.

In conclusion, sustained affirmation from both teachers and structured, collaborative feedback are essential for fostering self-awareness. This partnership effectively balances cultural demands, promoting children's holistic development by helping them build a positive self-concept through concerted home-school efforts—making it vital for ensuring comprehensive social-emotional learning.

### *Enhancing Emotional Regulation*

Emotional regulation refers to children's ability to identify, express, and manage their emotions appropriately while also understanding others' feelings and recognizing the impact of their behavior (Denham et al., 2014; Petit, 2024). According to the CASEL framework, effective emotional regulation involves appropriate expression of emotions, empathy, and control over emotional impulses. This study found that emotional regulation is significantly enhanced when parents and teachers work together through synchronized strategies and consistent environmental support. Several participants described the use of "calm corners," "emotional thermometers," and small games to support children's emotional development both at home and at school. For example:

Parents A : We set up a quiet corner according to the teacher's advice. When the child is angry, he will take the

initiative to calm down and say 'I need to be quiet for a while'. Compared with crying and throwing toys before, he has improved a lot.

Teacher A: When a child encounters emotional problems, I will first comfort him, hug him, and make him feel safe in the surrounding environment. I built an 'emotional hut' in the corner of the classroom, put soft pillows and picture books in it, and I also recommend that parents create similar spaces for their children at home. The 'calm corner' and 'emotional room' can provide children with a safe and comfortable environment, allowing them to divert their attention and relax when they are emotionally excited. Subsequent communication can also promote their cognition and expression of emotions, laying the foundation for improving their emotional management ability.

The above case clearly shows the role of the home-school collaborative model of "teacher guidance - parent practice" in children's emotional regulation. Teacher A provides children with a safe emotional buffer space by creating an "emotional hut" (equipped with pillows and picture books), and actively suggests that the family replicate this environment; Parent A responds to the teacher's guidance by setting up a "quiet corner", which makes the child change from "crying and throwing toys" to actively seeking calm (saying "I need to be quiet for a while"). In theory, this transformation can be explained using Ellis's (1962) ABC Model of Emotion: with support from teachers and parents, children's beliefs about emotional triggers (B) can shift—this makes them willing to seek out the quiet corner (C), ultimately leading to positive emotional outcomes. It also aligns with Petit's (2024) Synchronization Strategy Model of Emotional Regulation, which emphasizes the integration of language, methods, and environment. The connection between the emotional corner/quiet corner (environmental synchronization) and the child's verbalization—"I need to be quiet for a while" (language synchronization)—perfectly embodies this model. This home-school collaboration helps children restructure their understanding of emotions, a prerequisite for long-term improvement in emotional regulation skills.

This approach also aligns with existing research on emotional regulation in Chinese contexts. Traditional parenting styles in China often prioritize emotional suppression and discipline over emotional expression (Ren et al., 2020; Wang et al., 2022). However, as Ren et al. (2020) note, Chinese children thrive in emotionally positive environments—including formal and informal interactions with parents, especially when parents and teachers collaborate. The home-school feedback mechanism provides children with the psychological and emotional support needed to express their needs constructively. When parents and teachers work together to expose children to coping mechanisms in safe settings, they lay the foundation for children's emotional maturity (Cipriano et al., 2023).

In conclusion, integrating home and school efforts is the most effective way to support children's emotional regulation. Adults provide children with emotional regulation tools: they teach children language to express their emotions, offer opportunities to practice coping strategies, and create a safe emotional environment. This dual-support system—rooted in cognitive-emotional restructuring—plays a key role in promoting social and emotional learning.

### *Developing Interpersonal and Communication Skills*

Interpersonal and communication skills are core components of social and emotional learning, enabling children to build relationships, resolve conflicts, and engage effectively with peers and adults (Denham et al., 2014; Petit, 2024). According to the CASEL framework, these skills include listening, collaboration, turn-taking, and appropriate self-expression—competencies that are best developed through consistent modeling and real-life interaction. In this study, both parents and teachers emphasized that kindergarten offers a critical window for fostering these abilities through coordinated effort and shared strategies.

Parents and teachers described a range of collaborative efforts to support children's interpersonal growth. For example:

Parent A: When my child first started kindergarten, he was reluctant to interact with his peers. I know the importance of a good social environment to the development of a child's social skills, so I asked the teacher to arrange for him to sit at the same table with cheerful children, hoping to improve his social situation through positive peer influence. The teacher would share videos of my child's progress every day, such as videos of him actively building blocks, so that I could keep abreast of my child's social performance in kindergarten. The teacher also suggested that I encourage

my child to express himself through role-playing games at home. In this process, I clearly felt that my child's social skills were gradually improving.

Teacher A: I organized a group collaboration activity for the class to build a castle. The children communicated and collaborated with each other during the activity, and their abilities were greatly improved.

The above cases reflect the role of home-school collaboration in promoting children's interpersonal communication skills. Parent A forms a strategic linkage with teachers through "peer arrangement" and "role-playing games", and teachers use "progressive video feedback" to keep home and school synchronized, so that introverted children's social interaction changes from "passive avoidance" to "active participation"; Teacher A's "building a castle" activity creates a structured collaborative scene for children, improving peer communication skills through negotiation and collaboration. This process can be theoretically explained by Vygotsky's (1978) sociocultural theory, which identifies social interaction as the core of development. Teacher-led group activities like "castle-building" provide a "zone of proximal development," and the scaffolding from adults and peers enables children to master new social skills. This collaborative dynamic is further supported by Durlak's (2011) research on effective SEL practices, which emphasizes adapting interventions to contextual factors—such as combining teacher-directed activities and family-simulated practices in Chinese settings. The specific example of "Teacher-Led Activities (Dominant) → Parent Role-Playing (Simulation)" directly reflects this adapted approach, offering a culturally consistent path to skill development.

This observation is particularly important in Chinese culture, where hierarchical family structures may occasionally limit children's opportunities for peer collaboration (Wang et al., 2022). Studies show that with systematic reinforcement of teacher-led group tasks and family simulations (e.g., role-playing), children's social flexibility and verbal confidence increase significantly. This complements empirical data on SEL practices in non-Western contexts and confirms the need for culturally responsive approaches (Lim et al., 2024).

In conclusion, interpersonal skills can be developed through a home-school collaborative model that provides regular interactive experiences. This Vygotskian approach—scaffolded to fit cultural contexts—equips children with the foundation for healthy social interaction and prepares them for more complex social challenges.

## **Barriers to Effective Parent–Teacher Collaboration**

### *Differences in Educational Philosophy*

Differences in educational philosophies emerged in this research as another key barrier to effective parent-teacher collaboration, particularly exemplified by the misalignment between parents' focus on short-term comfort and teachers' emphasis on long-term developmental goals. This is illustrated by Parent E, who stated: "When the child cries... Why not satisfy his needs myself?" In contrast, Teacher I emphasized the importance of teaching children to manage their emotions to prepare them for the future—this highlights the core of the conflict. This tension aligns with Hargreaves' (2000) concept of presentism—a phenomenon where parents' focus on their children's immediate emotional needs conflicts with teachers' long-term developmental objectives. Furthermore, this dynamic shows that well-intentioned parental protectiveness can unnecessarily restrict the social interaction and problem-solving opportunities critical to SEL (Adams, 1997).

This philosophical divide is particularly pronounced in Chinese contexts. Ren et al. (2020) noted that Chinese parents—especially urban ones—often view children's emotional outbursts as developmentally inappropriate or socially shameful, responding with immediate suppression or indulgence rather than teaching emotional management skills. This creates a misalignment: home and school systems offer contradictory emotional responses, disrupting children's ability to internalize consistent self-regulation strategies. This misalignment is explained by Lawson et al.'s (2019) Developmental Priority Alignment Framework, which argues that a lack of alignment between home and school priorities for SEL outcomes—specifically, the conflict between immediate emotional pacification and long-term emotional resilience

building—directly undermines collaboration effectiveness. The tension between parents’ adherence to traditional, university-focused parenting values and schools’ SEL-centered curricula creates a unique cultural conflict that must be addressed.

In conclusion, the conflict between parents’ protection-oriented, short-term philosophy and educators’ development-focused, long-term approach poses a significant threat to effective SEL implementation. Bridging this gap requires more than just basic communication—it demands thoughtful, intentional, and structured conversations, as well as collaborative learning environments designed explicitly to align knowledge and action around a shared long-term goal: promoting children’s emotional independence and social competence.

### *Communication Barriers*

Communication barriers emerged as a significant hindrance to effective parent-teacher collaboration, primarily stemming from misaligned information flow and differing interpretations of children’s behavior. For example, Parent G struggled to find time to communicate due to work-related stress, while Teacher A often waited days for responses to WeChat messages sent to parents. Additionally, Parent F misunderstood the teacher’s assessment of their child’s focus—since the child’s behavior at school differed from that at home—highlighting how a lack of dialogue leads to conflicting views on children’s development. This lack of mutual communication aligns with Deslandes et al.’s (2015) research, which notes that effective home-school partnerships rely on two-way feedback channels. Without such channels, misunderstandings proliferate, and coordinated education becomes challenging. Modern digital communication further complicates this issue. Specifically, Palmer (2024) observes that superficial or asynchronous digital messages (e.g., unacknowledged WeChat messages) are inadequate for addressing complex developmental issues—these require face-to-face conversations to explore nuances.

Social and cultural factors in China further exacerbate these barriers: as Wang et al. (2022) found, parents often avoid communicating openly and directly with teachers due to hierarchical beliefs in teacher authority. This cultural expectation, combined with urban parents’ work pressures, severely limits the time and psychological capacity for sustained, meaningful interaction. A key issue is the lack of a systematic communication implementation framework (Cipriano et al., 2023). Without a structured, predictable, and reciprocal information-sharing system, partnerships remain ad-hoc and prone to failure—undermining the integrated support children need for SEL.

In conclusion, the identified communication barriers—including technological limitations, cultural norms, and logistical constraints—undermine the trust and coordination essential for effective parent-teacher collaboration. To address this, a shift away from over-reliance on technology is needed; instead, culturally sensitive engagement strategies should be developed—strategies that actively create space for respectful, reciprocal, and timely communication, ensuring all parties feel heard and aligned in supporting children’s social-emotional development.

### *Trust Issues*

This study found that a lack of mutual trust is one of the most significant impediments to effective parent-teacher alliances. Parental cases exemplify how perceived information asymmetry undermines trust—for instance, Parent G doubted a teacher’s report after a dispute involving surveillance footage, while Parent H questioned a teacher’s recommendation, believing the teacher lacked an understanding of their child. Conversely, teachers like Teacher F noted that their professionalism was questioned even after comprehensive communication, so the emotional cost of being perceived as unprofessional is substantial. Theoretically, Linton’s (1936) social role theory accounts for such conflicts: parents and teachers follow different “scripts”—parents prioritize immediate emotional needs, while teachers focus on long-term developmental outcomes. This role-based dissonance is key to understanding trust deficits. In Cipriano et al.’s (2023) recent SEL research, their findings imply that effective SEL relies on systemic, embedded partnerships—suggesting trust is not merely an interpersonal resource but a core component of the collaborative system. Without this systemic trust, collaborative mechanisms fail.

This trust deficit is exacerbated in the Chinese context. Ren et al. (2020) found that parents often express outward respect for teachers while harboring private distrust—especially when communication is one-way. Furthermore, Wang et al. (2022) note that urban dual-income families often rely on digital communication rather than face-to-face interaction, which weakens the sense of connection and further exacerbates misunderstandings. This dynamic stands in contrast to Western models of parent-teacher collaboration, which emphasize equal consultation (Bipath & Oosthuizen, 2023)—highlighting why a culturally specific approach to trust-building is necessary in China.

To sum up, building trust in the Chinese context requires going beyond mere transparency. Instead, culturally responsive, consistent strategies should be developed—strategies that acknowledge hierarchical expectations while fostering genuine, mutual respect between families and schools.

These empirical insights further underpin the theoretical and practical contributions of this study. This study advances current understanding of parent–teacher collaboration by developing an inductively derived conceptual framework grounded in interpretive phenomenological analysis. Unlike most existing PTC models derived from Western educational contexts, the present framework integrates culturally embedded moderating factors—particularly teacher authority and collectivism—that strongly moderate PTC mechanisms in Chinese kindergarten settings. In addition, this study identifies three culturally grounded barriers—differences in educational philosophies, communication gaps, and mistrust—that uniquely shape the effectiveness of PTC in supporting children’s social-emotional learning in Chinese early childhood settings. Collectively, these contributions highlight the need for context-responsive home–school collaboration strategies and extend the theoretical understanding of how PTC functions within sociocultural environments such as China.

### **Limitations**

The sample size and geographical coverage of this study are limited. The sample was composed of 8 parents and 10 teachers from a kindergarten in a city in Hebei Province. Although the data saturation test was passed, the small sample size may affect the applicability of the conclusions to other regions. In addition, the study did not involve kindergartens in rural areas or urban-rural fringe areas, and only used the interview method without combining quantitative data such as classroom observation, which resulted in a single method.

### **Conclusion**

This paper analyzes the impact of parent-teacher collaboration on the social-emotional learning (SEL) of young children in Chinese kindergartens. The findings reveal that regular communication and coordinated activities between home and school promote children’s self-awareness, emotional regulation, and interpersonal skills. However, divergences in educational philosophies, inadequate communication, and a lack of mutual trust often hinder collaborative efforts. Within China’s cultural context—characterized by respect for teachers, parental emphasis on academic achievement, and a focus on harmony—these barriers can primarily be traced to the country’s hierarchical structures and communication norms. Such cultural dimensions are crucial for understanding and developing more effective, culturally compatible parent-teacher partnerships.

To enhance parent-teacher partnerships, several culturally responsive practices are recommended. First, to align goals across home and school while honoring cultural norms, kindergarten schools can organize structured conversation sessions or “co-education” workshops. These events would bring teachers and parents together to discuss children’s social and emotional development, assisting in aligning long-term goals with short-term needs. Second, social-emotional learning and culture-aware communication modules should be integrated into teacher training, enabling teachers to interact with parents empathically and in a culturally conscious way. Third, schools can leverage communication tools familiar to Chinese families—such as WeChat-based feedback systems and parent-child conversation journals—to facilitate timely, respectful communication. Finally, local education bureaus can develop

policies that promote inclusive family involvement and SEL-focused co-parenting. These culturally grounded measures could help balance family and school responsibilities, enhance mutual understanding, and ultimately facilitate the overall social-emotional learning of children in China's early education system.

## Declarations

### *Authors' Declarations*

**Acknowledgements:** Not applicable.

**Authors' contributions:** Jiahui Li conducted the interviews, transcribed and analyzed the data, and drafted the manuscript. Barbara Elena M. Lagos provided conceptual guidance, supervised the study design, and contributed to critical revisions. Both authors discussed the findings and approved the final manuscript version.

**Competing interests:** The author declares that they have no competing interests.

**Funding:** Not Applicable.

**Ethics approval and consent to participate:** This study received ethical approval from the Saint Louis University Ethics Committee (SLU-REC) under Protocol No. SLU-REC 2024-248, approved on December 3, 2024. All research procedures followed the guidelines of the Declaration of Helsinki and institutional ethical standards. Participants were informed of the purpose, confidentiality, and voluntary nature of the study, and provided written consent to participate.

### *Publisher's Declarations*

**Editorial Acknowledgement:** The editorial process of this article was completed under the editorship of Dr. Mine Gol-Guven through a double-blind peer review with external reviewers.

**Publisher's Note:** Journal of Childhood, Education & Society remains neutral with regard to jurisdictional claims in published maps and institutional affiliation.

## References

- Adams, K. S. (1997). *Trust within the home-school relationship: An empirical investigation of parent and teacher perspectives* [Unpublished doctoral thesis]. University of Minnesota.
- Alzahrani, M., Alharbi, M., & Alodwani, A. (2019). The effect of social-emotional competence on children's academic achievement and behavioral development. *International Education Studies*, 12(12), 141-149. <https://doi.org/10.5539/ies.v12n12p141>
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.
- Bipath, K., & Oosthuizen, C. (2023). The dynamics of parent-teacher relationships in the socio-emotional development of young children. In *Research anthology on balancing family-teacher partnerships for student success* (pp. 166-177). IGI Global.
- Collaborative for Academic, Social, and Emotional Learning [CASEL]. (n.d.). *Fundamentals of SEL*. <https://casel.org/fundamentals-of-sel/>
- Collaborative for Academic, Social, and Emotional Learning (CASEL). (2003). *Safe and sound: An educational leader's guide to evidence-based social and emotional learning (SEL) programs*. Chicago. [https://www.casel.org/1A\\_Safe\\_&\\_Sound.pdf](https://www.casel.org/1A_Safe_&_Sound.pdf)
- Campos Cancino, G. A., & Moreno Mínguez, A. (2020). The family and its influence on children's creativity. *Revista Sobre la Infancia y la Adolescencia*, 19, 20-31. <https://doi.org/10.4995/reinad.2020.12839>
- Chan, T. C., Shu, Z., & Xiao, H. Y. (2021). Perception of Chinese parents toward school and family collaboration. *School Community Journal*, 31(1), 233-258.
- Cipriano, C., Strambler, M. J., Naples, L. H., Ha, C., Kirk, M., Wood, M., Sehgal, K., Zieher, A. K., Eveleigh, A., McCarthy, M., Funaro, M., Ponnock, A., Chow, J. C., & Durlak, J. (2023). The state of evidence for social and emotional learning: A contemporary meta-analysis of universal school-based SEL interventions. *Child Development*, 94(5), Article 13968. <https://doi.org/10.1111/cdev.13968>
- Denham, S. A., Mitchell-Copeland, J., Strandberg, K., Auerbach, S., & Blair, K. (1997). Parental contributions to preschoolers' emotional competence: Direct and indirect effects. *Motivation and Emotion*, 21(1), 65-86. <https://doi.org/10.1023/A:1024426431247>
- Denham, S. A., Bassett, H. H., Zinsser, K., & Wyatt, T. M. (2014). How preschoolers' social-emotional learning predicts their early school success: Developing theory-promoting, competency-based assessments. *Infant and Child Development*, 23(4), 426-454. <https://doi.org/10.1002/icd.1840>
- Deslandes, R., Barma, S., & Morin, L. (2015). Understanding complex relationships between teachers and parents. *International Journal about Parents in Education*, 9(1), 131-144. <https://doi.org/10.54195/ijpe.18241>
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and

- emotional learning: A meta-analysis of school-based universal interventions. *Child development*, 82(1), 405-432. <https://doi.org/10.1111/j.1467-8624.2010.01564.x>
- Ellis, A. (1962). *Reason and emotion in psychotherapy*. Lyle Stuart.
- Erikson, E. H. (1963). *Childhood and society* (2nd ed.). Norton.
- Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods*, 18(1), 59-82. <https://doi.org/10.1177/1525822X05279903>
- Guo, Y., Wu, X., & Liu, X. (2019). Challenges and opportunities in parent-teacher relationships in contemporary China. *Comparative and International Education*, 47(2), Article 5. <https://doi.org/10.5206/cie-eci.v47i2.9331>
- Griggs, S., & Rollo, G. (2023). *Partnerships in early childhood education: Engaging families in professional conversations*. In K. Burns (Ed.), Research Conference 2023: Becoming lifelong learners. Proceedings and program (pp. 68–75). Australian Council for Educational Research. <https://doi.org/10.37517/978-1-74286-715-1-14>
- Hargreaves, A. (2000). Mixed emotions: Teachers' perceptions of their interactions with students. *Teaching and Teacher Education*, 16(8), 811–826. [https://doi.org/10.1016/S0742-051X\(00\)00028-7](https://doi.org/10.1016/S0742-051X(00)00028-7)
- Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, 33(7), 14–26. <https://doi.org/10.3102/0013189X033007014>
- Jones, D. E., Greenberg, M., & Crowley, M. (2015). Early social-emotional functioning and public health: The relationship between kindergarten social competence and future wellness. *American Journal of Public Health*, 105(11), 2283–2290. <https://doi.org/10.2105/AJPH.2015.302630>
- Lawson, G. M., McKenzie, M. E., Becker, K. D., Selby, L., & Hoover, S. A. (2019). The core components of evidence-based social emotional learning programs. *Prevention Science*, 20(4), 457-467. <https://doi.org/10.1007/s1121-018-0953-y>
- Lang, S. N., Lieny, J., Schoppe-Sullivan, S., & Wells, M. B. (2020). Associations between parent–teacher cocaring relationships, parent–child relationships, and young children's social emotional development. *Child & Youth Care Forum*, 49(4), 623–646. <https://doi.org/10.1007/s10566-020-09545-6>
- Latif, M. A., Amir, R., Marzuki, K., Gaffar, F., & Nurhayati, S. (2023). Kolaborasi strategis lembaga PAUD dan orang tua di era digital melalui program parenting. *Obsesi*, 7(3), 3169–3180. <https://doi.org/10.31004/obsesi.v7i3.4485>
- Linton, R. (1936). *The study of man: An introduction*. Appleton-Century-Crofts.
- Li, G., Lin, M., Liu, C., Johnson, A., Li, Y., & Loyalka, P. (2019). The prevalence of parent-teacher interaction in developing countries and its effect on student outcomes. *Teaching and Teacher Education*, 86, 102878. <https://doi.org/10.1016/j.tate.2019.102878>
- Liu, G., Jin, Z., Zheng, X., Wang, Z., & Liu, W. (2024). Associations between teacher–parent relationships and preschool children's social behavior problems—the chain mediating roles of work–family conflict and parenting self-efficacy. *Frontiers in Psychology*, 15, 1349652. <https://doi.org/10.3389/fpsyg.2024.1349652>
- Lim, J. H., Rho, E., & Yang, C. (2024). Evidence-based practices of culturally responsive social and emotional learning (SEL) programs: A systematic review and meta-analysis. *School Psychology Review*, 1-16. <https://doi.org/10.1080/2372966X.2024.2432853>
- Maia, C., Braz, D., Helder, M. F., Sarmiento, H., & Machado-Rodrigues, A. (2025). the impact of parental behaviors on children's lifestyle, dietary habits, screen time, sleep patterns, mental health, and BMI: A scoping review. *Children*, 12(2), 203. <https://doi.org/10.3390/children12020203>
- Nursa'adah, E., Mulyana, E., & Nurhayati, S. (2022). Parenting patterns impact on children's social intelligence: Study on Program Keluarga Harapan beneficiaries family. *Journal of Educational Expert*, 5(2), 59–65. <https://doi.org/10.30740/jee.v5i2p59-65>
- Nurhayati, S. (2021). Parental involvement in early childhood education for family empowerment in the digital age. *Jurnal Empowerment: Jurnal Ilmiah Program Studi Pendidikan Luar Sekolah*, 10(1), 54–62. <https://doi.org/10.22460/empowerment.v10i1p54-62.2185>
- Palmer, S. J. (2024). *How parental engagement and collaboration with teachers supports elementary school students' social-emotional learning* [Unpublished doctoral dissertation]. Grand Canyon University.
- Petit, B. E. (2024). *Emotion knowledge, its applications, and their associations with african american children's social relationships with teachers and peers in kindergarten and first grade* [Unpublished master's thesis]. Portland State University.
- Powell, D. R., Son, S. H., File, N., & San Juan, R. R. (2010). Parent-school relationships and children's academic and social outcomes in public school pre-kindergarten. *Journal of School Psychology*, 48(4), 269–292. <https://doi.org/10.1016/j.jsp.2010.03.002>
- Rosita, T., Nurhayati, S., Jumiatin, D., Rosmiati, A., & Abdu, W. J. (2020). Using traditional roleplay games by adults to nurture a culture of collaboration among children amidst widespread engagement in online games within today's technological society. *Journal of Critical Reviews*, 7(7), 183–186. <https://doi.org/10.31838/jcr.07.07.29>
- Ranson, K. E., & Urlichuk, L. J. (2008). The effect of parent–child attachment relationships on child biopsychosocial outcomes: A review.

- Early Child Development and Care*, 178(2), 129–152. <https://doi.org/10.1080/03004430600685282>
- Ren, L., & Pope Edwards, C. (2016). Contemporary Chinese parents' socialization priorities for preschoolers: A mixed methods study. *Early Child Development and Care*, 186(11), 1779–1791. <https://doi.org/10.1080/03004430.2015.1132418>
- Ren, L., Cheung, R. Y., Boise, C., Li, X., & Fan, J. (2020). Fathers' perceived co-parenting and children's academic readiness among Chinese preschoolers: Longitudinal pathways through parenting and behavioral regulation. *Early Childhood Research Quarterly*, 53, 77–85. <https://doi.org/10.1016/j.ecresq.2020.03.005>
- Suharyat, Y., Nurhayati, S., Januliawati, D., Haryono, P., Muthi, I., & Zubaidi, M. (2023). Tantangan pemberdayaan orang tua dalam meningkatkan mutu layanan PAUD era digital. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 7(1), 406–415. <https://doi.org/10.31004/obsesi.v7i1.3827>
- Smith, J. A., & Osborn, M. (2003). Interpretative phenomenological analysis. In J. A. Smith (Ed.), *Qualitative psychology: A practical guide to research methods* (pp. 51–80). Sage. <https://psycnet.apa.org/record/2003-06442-003>
- Smith, J. A., Flowers, P., & Larkin, M. (2009). *Interpretative phenomenological analysis: Theory, method and research*. Sage. <https://doi.org/10.1080/14780880903340091>
- Si, L. B., Qiao, H. Y., & Li, X. W. (2017). Education quality of rural preschool education institutions based on the NAEYC evaluation standard: An empirical study of 20 kindergartens in Cang province, Hebei province. *Eurasia Journal of Mathematics, Science and Technology Education*, 13(12), 8295-8304. <https://doi.org/10.12973/ejmste/80789>
- Taylor, C. (2012). Learning in Australian early childhood education and care settings: Changing professional practice. *Education 3-13*, 40(1), 7–18. <https://doi.org/10.1080/03004279.2012.635046>
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Wang, B., Luo, X., Yue, A., Tang, L., & Shi, Y. (2022). Family environment in rural China and the link with early childhood development. *Early Child Development and Care*, 192(4), 617–630. <https://doi.org/10.1080/03004430.2020.1784890>
- Wang, S., Dong, X., & Mao, Y. (2017). The impact of boarding on campus on the social-emotional competence of left-behind children in rural western China. *Asia Pacific Education Review*, 18, 413–423. <https://doi.org/10.1007/s12564-017-9478-5>
- Wang, S., Zhao, Y., & Yin, J. (2023). Current situation and improvement of home co-education in kindergartens in China. *Iris Journal of Educational Research*, 1(4). <https://doi.org/10.33552/IJER.2023.01.000517>
- Yong, G. H., Lin, M. H., Toh, T. H., & Marsh, N. V. (2023). Social-emotional development of children in Asia: A systematic review. *Behavioral Sciences*, 13(2), 123. <https://doi.org/10.3390/bs13020123>

# ‘It’s just their mind taking a break when it needs to’: How parents in Ireland view and manage mind-wandering in young children

Olivia Wynne<sup>1</sup>, Maisie Flynn<sup>2</sup>, Agnieszka Graham<sup>3</sup>, Teresa McCormack<sup>4</sup>, Joyce Senior<sup>5</sup>, John McMullen<sup>6</sup>, Michelle Downes<sup>7</sup>

**Abstract:** Mind-wandering occurs when thoughts become unrelated to the task at hand, a phenomenon commonly experienced by adults and children. Recent research has revealed that mind-wandering can negatively impact children's learning. However, no studies have explored parents' perspectives of their children's mind-wandering, despite the crucial role parents play in supporting children's learning. This study investigated how parents of children in the first years of formal education perceive and manage mind-wandering during school tasks. Three online focus groups were conducted with parents (N=7) from the island of Ireland. Reflexive thematic analysis resulted in the development of five themes: 1) Mind-wandering is a typical, positive element of learning in children, 2) Mind-wandering is more likely to occur in certain circumstances, 3) Children tend to share the content of their mind-wandering, providing parents with valuable insights, 4) Parents adopt a trial-and-error approach to the management of mind-wandering, 5) Parents' frustration with mind-wandering arises from time constraints. Although parents generally feel confident in the management of mind-wandering during learning activities, they expressed concerns about future challenges as homework becomes more demanding. These findings can inform further research by acknowledging parents' expressed needs, so that children can be adequately supported before mind-wandering impacts their learning.

## Article History

Received: 05 May 2025

Accepted: 23 December 2025

## Keywords

Mind-wandering;  
Young children;  
Parents' perspectives;  
Educational neuroscience;  
Qualitative research

## Introduction

Mind-wandering is a common phenomenon among both adults and children (Cherry et al., 2022; Killingsworth & Gilbert, 2010; Moffett & Morrison, 2020). Although definitions of mind-wandering vary across the literature (Seli et al., 2018), for the purpose of this study, it is defined as engaging in thoughts unrelated to the task at hand (Schooler et al., 2014). This definition highlights the core aspect of mind-wandering, emphasising its association with internally generated thoughts and a temporary dissociation from the external environment. While mind-wandering is a form of inattention, it is distinct from other types of inattention, such as distraction. Unlike distraction, which is triggered by external stimuli, mind-wandering often arises spontaneously and involves trains of thoughts unrelated to the task at hand, such as reminiscing about past events or contemplating the future (Seli et al., 2018). The underlying mechanisms of mind-wandering have been widely investigated, with research pointing to neural and cognitive processes rooted in the brain's default network. This network is composed of interrelated brain regions that are more active during passive tasks than during those requiring external focus (Buckner, 2013; Ciaramelli & Treves, 2019).

<sup>1</sup> University College Dublin, School of Psychology, Dublin, Ireland, e-mail: [wynne.olivia@outlook.com](mailto:wynne.olivia@outlook.com), ORCID: <https://orcid.org/0009-0005-5316-2075>

<sup>2</sup> University College Dublin, School of Psychology, Dublin, Ireland, e-mail: [maisie.flynn@ucdconnect.ie](mailto:maisie.flynn@ucdconnect.ie), ORCID: <https://orcid.org/0009-0009-4688-9566>

<sup>3</sup> Queen's University Belfast, School of Psychology, Belfast, United Kingdom, e-mail: [Agnieszka.Graham@qub.ac.uk](mailto:Agnieszka.Graham@qub.ac.uk), ORCID: <https://orcid.org/0000-0002-1358-7512>

<sup>4</sup> Queen's University Belfast, School of Psychology, Belfast, United Kingdom, e-mail: [t.mccormack@qub.ac.uk](mailto:t.mccormack@qub.ac.uk), ORCID: <https://orcid.org/0000-0002-5370-4496>

<sup>5</sup> University College Dublin, School of Education, Dublin, Ireland, e-mail: [joyce.senior@ucd.ie](mailto:joyce.senior@ucd.ie), ORCID: <https://orcid.org/0000-0001-7036-3956>

<sup>6</sup> Queen's University Belfast, School of Psychology, Belfast, United Kingdom, e-mail: [j.mcmullen@qub.ac.uk](mailto:j.mcmullen@qub.ac.uk), ORCID: <https://orcid.org/0000-0003-1838-2652>

<sup>7</sup> University College Dublin, School of Psychology, Dublin, Ireland, e-mail: [michelle.downes@ucd.ie](mailto:michelle.downes@ucd.ie), ORCID: <https://orcid.org/0000-0002-9317-0644>

## Mind-Wandering in Children

Although there is a considerable amount of research on mind-wandering in adults (Blondé et al., 2022; Chu et al., 2023; Kam et al., 2022), mind-wandering in children is under-studied (Frick et al., 2020; Hasan et al., 2024; Keulers & Jonkman, 2019). A limited number of studies have explored mind-wandering in typically developing children using the probe-caught method (Cao et al., 2022; Cherry et al., 2022, 2024; Hasan et al., 2024; Keulers & Jonkman, 2019; McCormack et al., 2019; Ye et al., 2014; Zhang et al., 2015). Some research has also explored mind-wandering in children diagnosed with various developmental conditions such as attention deficit hyperactivity disorder (ADHD), dyslexia and sluggish cognitive tempo (Becker et al., 2022; Bonifacci et al., 2022; Frick et al., 2020; Merrill et al., 2022; Van den Driessche et al., 2017). Although the presence of a developmental disorder such as ADHD is associated with increased mind-wandering and off-task behaviour in children (Frick et al., 2020; Junod et al., 2006; Merrill et al., 2022), typically developing children also frequently engage in mind-wandering (Cherry et al., 2022; Moffett & Morrison, 2020). Typically developing children are not currently well-represented in the mind-wandering literature. For instance, although research indicates that mind-wandering is associated with poor performance in cognitively challenging tasks, little research has investigated this in typically developing children (Keulers & Jonkman, 2019). This lack of understanding of mind-wandering in typically developing children makes it difficult to determine whether mind-wandering is as damaging to cognitive performance and learning as suggested by research with participants diagnosed with ADHD (Bozhilova et al., 2018). Furthermore, given that children with and without diagnoses such as ADHD experience difficulties in learning related to cognition, including issues with sustained attention (Slattery et al., 2022), it may be most beneficial to include all children in research on mind-wandering, not just those with developmental disorder diagnoses. This inclusive approach allows for findings to be of relevance to all children (Holmes et al., 2019).

Mind-wandering may vary based on a child's developmental stage, as connections between brain areas undergo extensive changes that influence attention and behavioural control (Posner et al., 2014). For instance, sustained attention develops throughout childhood, with younger children aged between five and six years old requiring more breaks while learning (Betts et al., 2006). Furthermore, mind-wandering naturally occurs during pretend play in children, with play acting as an outlet for creativity and imagination experienced through mind-wandering (Russ, 2020). Likewise, spontaneous association is an integral part of both mind-wandering and pretend play, which is beneficial for creativity and problem solving (Olson et al., 2021; Russ, 2020). Although it is possible that developmental stage may impact mind-wandering behaviour, empirical studies such as Cherry et al. (2022) report that age did not impact mind-wandering levels in 6- to 11-year-olds. More research is needed to better understand the developmental aspects of mind-wandering.

### Impact of Mind-Wandering on Learning

As a form of inattention, mind-wandering is likely to impact learning. Most educationally relevant research in adults and adolescents suggests that higher rates of mind-wandering are associated with poorer comprehension and less learning. In adults, research using intermittent thought-probes during lectures and learning activities (e.g., discussions, problem-solving) consistently shows that mind-wandering occurs 30-40% of the time and is linked to reduced recall of lecture content (Bunce et al., 2010; Risko et al., 2012; Szpunar et al., 2013). Similar patterns are observed in adolescents, with studies showing that task-unrelated thoughts during reading negatively impact comprehension in middle and high school students (Mrazek et al., 2013; Soemer et al., 2019). Greater interest in a topic is associated with less mind-wandering, highlighting the importance of maintaining student engagement to improve learning outcomes.

Cherry et al. (2022, 2024) are the only studies to specifically examine the link between off-task thinking and learning in children. In their 2022 study, 6- to 11-year-olds listened to a story while intermittently reporting their focus. Key findings included that more off-task episodes were associated with poorer immediate recall, children reported being off-task about 25% of the time regardless of age, and situational interest indirectly affected memory through off-task thoughts. Cherry et al. (2024) refined their

measure to capture 'pure' mind-wandering, defined as task-unrelated thoughts without external triggers. In this study, 8- to 9-year-olds reported off-task thoughts 24% of the time, but pure mind-wandering was observed less frequently (9%). Despite this, pure mind-wandering was strongly linked to poorer memory recall, both immediately and after a one-week delay.

A study with kindergarten students (mean age of 5.76 years), demonstrated that different types of off-task behaviour can have different effects on young learners (Moffett & Morrison, 2020). Specifically, higher levels of mind-wandering were related to poorer executive functions. However, engaging with peers during off-task behaviour was positively associated with executive functions and achievement outcomes. Furthermore, Moffett and Morrison (2020) reported that lower working memory and attentional control predicted a larger amount of time spent mind-wandering. Moffett and Morrison (2020) also reported that children who engaged in more mind-wandering made fewer advances in reading comprehension a year later. This illustrates how it is important for teachers and parents to recognise the nature of off-task behaviour, and the importance of creating strategies that target specific types of inattention.

Research has also indicated potential benefits of mind-wandering in learning contexts. For instance, mind-wandering is associated with greater proficiency in skills such as problem-solving, future planning and creativity among young adults (Baird et al., 2011; Mooneyham & Schooler, 2013; Pachai et al., 2016). It has also been suggested that engaging in simple tasks that promote mind-wandering can foster creative problem-solving and enrich learning (Baird et al., 2012; Hines et al., 2019). However, further research is needed to explore these benefits in children, as there are currently no empirical studies examining the relationship between mind-wandering (as measured by thought probes) and creativity in this age group.

### **Managing Mind-Wandering in Children**

Considering both the positive and negative aspects of mind-wandering in learning contexts, effectively managing mind-wandering in children could help them harness its benefits while mitigating its drawbacks (Gericke et al., 2022). Although some research suggests the potential of mind-wandering interventions (Feruglio et al., 2021; Frank et al., 2021; Mrazek et al., 2013), further studies are needed to assess their effectiveness in young children. Fredrick et al. (2025) outline helpful strategies for children who are diagnosed with Cognitive Disengagement Syndrome (CDS), a condition that involves persistent mind-wandering that could also be applied more broadly for young children where mind-wandering becomes problematic. The authors report that practicing mindfulness, being active, prioritising sleep and employing effective school accommodations such as attention prompts and breaks, transitional prompts and active learning strategies may help children with this condition. However, Fredrick et al. (2025) highlight that research on how to best support children with this condition is limited. Despite the lack of evidence-based supports to assist parents with managing mind-wandering, Becker et al. (2022) report that parents of children diagnosed with sluggish cognitive tempo have attempted to manage mind-wandering by employing strategies such as keeping routines and using verbal reminders or prompts to bring their child's focus back to task. In terms of supporting general attention skills, the Irish Department of Children, Disability and Equality (2021) make suggestions for ways that pre-school children with disabilities can be supported to develop attention and listening skills through the Access and Inclusion Model. Suggestions include reducing background noise, using children's names, supporting children with transitions, using short and simple instructions, gestures and visuals and talking to children at their level. The Irish Department of Children, Disability and Equality (2021) also suggest playing specific games to support the development of attention skills. Although this booklet is targeted towards pre-school children diagnosed with a disability, it is possible that these strategies could be helpful to children of all abilities at early stages of education.

Furthermore, environmental and personal factors can mediate mind-wandering. For example, inadequate sleep has been shown to contribute to inattention in typically developing children aged six to eighteen years old (Spruyt et al., 2019) and in children aged nine to sixteen years old diagnosed with sluggish cognitive tempo (Becker et al., 2022). Additionally, Cherry et al. (2022) reported that the more

interested a child was in a topic, the less they experienced mind-wandering which led to greater recall of facts from a story. In a recent study, children who experienced more mind-wandering were more likely to experience interference from noise (Massonnié et al., 2022). These findings highlight that there are malleable factors that mediate mind-wandering, however, no research to date has investigated parents' perceptions of how mind-wandering can be managed.

### **Importance of Parents' Role in Children's Learning and Development**

Parents play a crucial role in their children's development and learning (Davis-Kean et al., 2021; Liu et al., 2020; Usmanovna, 2021). Parental scaffolding is particularly important during the early stages of development (Mermelshtine, 2017; Wood et al., 1976). Additionally, parents play a key part in the development of their child's executive functions (Hughes & Devine, 2019; Koskulu-Sancar et al., 2023) such as cognitive flexibility, executive control, sustained attention and working memory – all of which are suggested to influence mind-wandering (Mooneyham & Schooler, 2013; Keulers & Jonkman, 2019; Wilson et al., 2022). Considering that parents have a major role in their children's development and learning, investigating their perspective on their children's mind-wandering could provide a valuable insight into how children experience mind-wandering, and also provide insight into how parents perceive mind-wandering.

Despite the important role that parents play in their children's development, there is very limited research on parents' perspectives of mind-wandering. Studies that have gathered data from parents on their children's mind-wandering include Hasan et al. (2024) who investigated the relation between mind-wandering and executive functions in typically developing 8- to 12-year-olds. Hasan et al. (2024) used a mind-wandering questionnaire to gather data from parents about their children's mind-wandering to corroborate self-reports in children. Hasan et al. (2024) report that mind-wandering was less frequent when working memory capacity was greater. Gozpinar et al. (2023) gathered data from parents of children diagnosed with sluggish cognitive tempo to evaluate a self-report scale. Parents were asked to complete a form which included a subsection on their children's 'daydreaming'. Only one study conducted by Becker et al. (2022) gathered qualitative data from parents related to mind-wandering. This study involved parents of children aged 9- to 16-years-old and investigated their views on the phenomenology, daily impact and treatment of sluggish cognitive tempo - a condition involving excessive mind-wandering. It is evident that there is a large gap in the literature on parents' perspectives of mind-wandering. Gathering data from parents can provide researchers with detailed insights encompassing a wide range of children's behaviour (Hasan et al., 2024; Wilson et al., 2022). Specifically examining how parents of young children view and manage mind-wandering in relation to school tasks can aid in the understanding of mind-wandering in the context of learning. Gaining insight into how parents manage mind-wandering can initiate a dialogue on how parents are already handling mind-wandering and highlight any areas in which they may need more support. Involving parents in research on mind-wandering would help to make supports and policies aimed at promoting attention in young children more relevant and ecologically valid.

### **The Current Study**

The current study aimed to gather qualitative data from parents of children in the first two years of school (aged four to six) through focus groups to understand their perspectives of mind-wandering. The research addressed the following questions: 1) How do parents of children in the first two years of formal education *view* their child's mind-wandering in relation to school tasks? and 2) How do these parents *manage* their child's mind-wandering in relation to school tasks? The present study aimed to engage with parents directly so that the development of supports and policies can incorporate research on parents' perspectives and their expressed needs (Hickey & Lecky, 2021). Additionally, the present study incorporated a co-creative, collaborative approach with key stakeholders in the area to ensure relevant and applicable research (Schuiling & Kiewiet, 2016).

## Method

### Participants

Focus groups were conducted with parents/guardians of children in their first two years of formal education (Junior Infants/Year 1, Senior Infants/Year 2) who had completed at least six months of schooling by March 2024. Parents were required to be living in the Republic of Ireland or Northern Ireland. An all-island approach was implemented to ensure that findings were relevant across the whole island of Ireland (Roulston et al., 2023).

Participants were recruited through advertising on social media, online parent forums, physical posters and direct contact with relevant organisations and schools. Potential participants completed a participant screening questionnaire. The aim was to recruit a diverse participant sample in terms of gender, socio-economic status, and geographic location. Measures were taken to reach this goal, such as contacting organisations based across Northern Ireland and the Republic of Ireland, including organisations aimed at male parents, as fathers are reportedly difficult to recruit (Ulferts, 2020). Both public and private schools were contacted, as well as organisations for children who are socio-economically disadvantaged. One hundred organisations and schools were contacted directly, over forty of which were based in Northern Ireland.

Despite targeted efforts to recruit male participants, all seven participants were female. Participants were aged between thirty-nine and forty-six years old. There were four participants from Dublin, two from Cork and one from Antrim in Northern Ireland. Participants' children were aged 4 to 6 years old, consisting of four boys and four girls who all attended public schools. Five children were in Junior Infants/Year 1 and three children were in Senior Infants. None of the participants' children attended schools for children at risk of educational disadvantage.

### Procedures

This study aligned with an interpretivist research paradigm and employed a phenomenological approach. Focus groups were deemed an appropriate method of data collection as this method is suitable for generating insights and ideas through discussion and shared understanding (Krueger, 2014). Focus groups are an effective and popular method of collecting data from parents (Adler et al., 2019). In order to ensure a collaborative approach with key stakeholders in the area, representatives from the Irish National Teachers' Organisation, Teaching Council of Ireland, Education Authority of Northern Ireland, directors of the Doctorates in Educational Psychology in University College Dublin and Queen's University Belfast, as well as a parent representative/expert were involved in the co-creative process of this study. These stakeholders provided feedback at all stages of the study, including the formation of the focus group questions (Table 1). This study was pre-registered on the Open Science Framework in February 2024. The pre-registration stated that there would be up to thirteen questions asked in the focus group, however, an additional four questions were added based on feedback from stakeholders.

Focus groups were two hours long and took place online via Zoom to improve accessibility and to facilitate a diverse geographical sample. Two focus groups were conducted; focus group one had three participants and focus group two had four participants. Small groups of three to five participants are considered most effective for online focus groups (Lobe, 2017). Participants were emailed the focus group questions and the focus group etiquette in advance (Lobe et al., 2020). Participants were provided with the definition of mind-wandering before the focus group, "Mind-wandering is a common everyday experience in which attention becomes disengaged from the immediate external environment and focused on internal trains of thought" (Schooler et al., 2014, p.1). Participants were given a short presentation before the focus group, reminding them of the mind-wandering definition and focus group etiquette. The difference between mind-wandering and distraction was emphasised and explained through examples, such as how a child's attention interrupted by someone walking into the room is an example of distraction, not mind-wandering. Afterwards, participants were emailed a debrief and gifted a 15 euro/pound voucher.

The focus groups were automatically transcribed through Zoom. The transcripts were reviewed to

ensure accuracy, the data was de-identified and identifiable information was deleted. Once the first two focus groups were completed, the procedure to assess whether saturation had been reached was followed in accordance with the pre-registration. The data was reviewed and it was evident that saturation had been reached after two focus groups; there were no new relevant codes evident in the data and information began to be repeated to the point where any new information did not contribute to the understanding of the research questions (Hennink & Kaiser, 2022). Therefore, no additional focus groups were required.

**Table 1**  
*Focus Group Questions*

Question Category	Questions
How parents view their children's mind-wandering in relation to school tasks.	<ul style="list-style-type: none"> <li>● How would you describe a young child's mind-wandering? Do you want to share some examples?</li> <li>● Does your child experience mind-wandering while engaging in school related tasks (e.g. homework)?</li> <li>● What is the impact of your child's mind-wandering?</li> <li>● What causes or contributes to your child's mind-wandering?</li> <li>● In what context, if any, do you discuss mind-wandering with your child's teacher(s)?</li> <li>● What are positive aspects of mind-wandering?</li> <li>● What are the negative aspects of mind-wandering?</li> <li>● In what context, if any, has your child ever talked about their mind-wandering or inattention with you?</li> </ul>
How parents manage their children's mind-wandering in relation to school tasks.	<ul style="list-style-type: none"> <li>● What strategies do you use when you notice mind-wandering in your child?</li> <li>● What factors, if any, influence what strategy/approach you use?</li> <li>● Have you found any ways to manage your child's mind-wandering during school tasks?</li> <li>● In your experience, what have you found helpful and what have you found unhelpful?</li> </ul>
Parents' skills and parental support	<ul style="list-style-type: none"> <li>● Do you feel equipped to manage your child's mind-wandering in relation to school tasks?</li> <li>● How do you feel about managing your child's mind-wandering in relation to school tasks?</li> <li>● How would you describe any support you have received to help manage your child's mind-wandering in relation to school tasks?</li> <li>● How could you be further supported in managing your child's mind-wandering?</li> </ul>
Parents' ideas	<ul style="list-style-type: none"> <li>● Can you share any other insights or ideas in this area?</li> </ul>

## Data Analysis

The focus group transcripts were analysed using inductive reflexive thematic analysis (Braun & Clarke, 2006). Researcher OW familiarised herself with the focus group data by reading and re-reading the transcripts. OW then generated codes in the transcripts based on the research questions, and then combined codes to create rich, multifaceted, engaging semantic and latent themes. The themes were reviewed, refined and given detailed, descriptive names. Researchers OW and MF engaged in a dialogue and consensus process by reviewing and discussing the themes and codes to ensure agreement between the researchers and to encourage reflexivity and authenticity (Cofie et al., 2022). The participants were not previously known to OW which positively contributed to the reflexive process, furthermore, researcher OW had previous experiences of conducting qualitative analysis which was an advantage. The results were reported in line with the Standards for Reporting Qualitative Research guidelines (O'Brien et al., 2014).

## Ethics

Ethical approval was obtained from the Taught Masters Research Ethics Committee, School of Psychology at University College Dublin in December 2023. Participants received an information sheet and provided informed written consent through an online form.

## Findings

Five themes were generated: 1) Mind-wandering is an expected and positive element of learning in

It's just their mind taking a break when it needs to': How parents...

children, 2) Mind-wandering is more likely to occur in certain circumstances, 3) Children tend to share the content of their mind-wandering, providing parents with valuable insights, 4) Parents adopt a trial-and-error approach to the management of mind-wandering, 5) Parents' frustration with mind-wandering arises from time pressure. Subthemes were also developed from these main themes. The themes and subthemes are described below and illustrated with quotes from participants. Additional quotes are displayed in Table 2 below.

### **Mind-Wandering is an Expected and Positive Element of Learning in Children**

Parents expressed the view that mind-wandering is a common occurrence in young children that is "developmentally appropriate for their age" (Participant 4). They described instances of their children experiencing mind-wandering during "any task you want them to focus on" (Participant 2) including homework, play and getting dressed. Although parents were not familiar with the term mind-wandering, they were still able to identify it in their children. They recognised mind-wandering when their child would go quiet, appear not to be listening, stop a task, ask "random" questions, or start talking off-topic.

Several benefits associated with mind-wandering were mentioned such as how it can foster imagination and creative thinking, how it promotes a sense of curiosity and how it inspires children to ask questions that promote learning,

I would kind of go back to what. (Participant 3)

said.

I think it can be a positive thing, and you know a sign of sort of creativity...It's sort of like a curiosity. (Participant 2).

Mind-wandering was also said to help children to process past events and develop deeper thinking, reflection and insights.

Due to parents' belief that mind-wandering is a valuable process in learning, they are inclined to refrain from redirecting their child back to a task unless there is time pressure to complete the task. There was a general feeling that because homework is short at this age (approximately ten minutes), mind-wandering is not a big issue when it occurs even though it results in homework taking longer,

...a lot of the time I think it's fine and homework is so short like it's not, it's not usually really a problem (Participant 4).

However, one parent mentioned that mind-wandering can disrupt the flow of work, impacting its quality,

If her mind is wandering and she's distracted, her work mightn't be as good as it could be (Participant 3).

Another participant mentioned how her child's mind-wandering made it difficult for her to complete homework, which negatively impacted her confidence in reading in school. However, this was quickly resolved when they started completing homework in the morning which greatly improved her concentration.

### **Mind-Wandering is More Likely to Occur in Certain Circumstances**

Participants described how mind-wandering is more likely to occur under specific conditions influenced by environmental and personal factors. Specifically, parents reported that children are particularly prone to mind-wandering when their needs are not met, when they are in distracting environments, or when they have less agency over a task.

#### ***Mind-Wandering is More Likely to Occur When a Child's Needs Are Not Met***

Parents explained how mind-wandering is more likely to occur if their child's needs are not met. For instance, children experience more mind-wandering when they are trying to complete a task when hungry or tired,

If she's tired, yes, she would find it hard to stay on task. I think that would definitely contribute to her mind-wandering (Participant 1).

Parents also commented on how a child's mind wanders more when they are upset or emotionally dysregulated. Many participants commented that attempting to complete homework straight after school resulted in more mind-wandering,

...heading into homework when they're dysregulated is not going to sustain them to concentrate and complete it (Participant 1).

### ***Environmental Factors Impact Mind-Wandering***

Parents noted that their children are easily distracted by their environment, which can lead to mind-wandering. Aspects of children's environments can trigger memories, leading to mind-wandering,

...something in our work has reminded her of something that happened in school and then she will go on a tangent (Participant 3).

Likewise, children create links to their interests, taking them off task:

He's very interested in cows, so I'll be saying, "Do you know which letters have the "a" sound?" or "Which words have the "a" sound?" and there'll be a pause, and he'll say, "Mum, do you know, four of my cows had calves today?" So it's completely not relevant at all to what we've been doing (Participant 5).

Furthermore, quiet times such as bed time, and quiet play when a child is alone was associated with more mind-wandering,

If you're putting them to bed and it's quiet, then they might say, "...what happens when somebody dies?"...that's when the mind does wander, when they're actually still or being asked to be still and quiet (Participant 2).

### ***Mind-Wandering is More Likely to Occur When A Child Has Less Agency Over A Task***

Participants highlighted that their children were more likely to mind-wander when engaging in tasks that they found boring or repetitive. However, when children are given more agency over a task, such as choosing a task themselves or choosing when to complete homework, they are less likely to mind-wander,

We could do spelling or educational games at home and she would be quite focused on that because she wants to play it and it's her choice (Participant 2).

If we have the afternoon more or less free, she can choose when she's ready to sit down and do (homework) and that definitely helps with mind-wandering, when she chooses to do it herself she tends to be ready (Participant 1).

I agree with (Participant 1) and (Participant 3). I think if children feel they have a bit more agency, it works better (Participant 2).

### ***Children Tend to Share the Content of Their Mind-Wandering, Providing Parents with Valuable Insights***

There was a prominent theme of how children tend to share the content of their mind-wandering. Parents described how mind-wandering,

..would be very much like her train of thought, it would be rambling about whatever she wants to talk about, rather than staying on the task (Participant 3).

...and how mind-wandering without speaking was uncommon, "she doesn't do much daydreaming where she's not talking to me (Participant 1).

Parents also mentioned that their children are open to discussing their thoughts when asked,

I encourage my children when I see them mind-wandering, I ask them, "A penny for your thoughts?", and they'll tell me what they're thinking (Participant 7).

Children's tendency to talk about what is on their mind provides parents with valuable insights into their children's lives and thought processes,

It'll give you a better insight into their personality and their thought processes (Participant 6).

It might help to figure out what's on her mind, what's worrying her (Participant 1).

This also helps to build the relationship between parent and child. Parents were mindful that they wanted their children to know that they value their ideas and insights.

It's just their mind taking a break when it needs to': How parents...

### **Parents Adopt A Trial-And-Error Approach to The Management of Mind-Wandering**

Parents received limited formal support for their children's mind-wandering which has led parents to approach mind-wandering with a trial-and-error mentality. One common approach is to only "interfere" with their child's mind-wandering if they are limited by time, or if it negatively impacts their learning,

If I thought it was positive or their mind just taking a break where it needs to, I think I would just overlook it (Participant 2).

However, this participant went on to highlight,

If you notice that it's interfering with them getting something done and that it's having a negative effect, it's worth implementing a strategy to get around it, I think, and helping them to keep it in its place (Participant 2).

### ***The Effectiveness of Simple Strategies***

Parents use simple strategies developed through trial-and-error to keep their child on task. These include redirection, using their child's name to bring their focus back to the task, staying close to their child while they complete a task and doing homework in a quiet environment free from distractions at a time that suits their child. If their child had started talking off-topic due to mind-wandering, parents reassure their child that they can talk later once the task is finished. Some parents motivate their children to finish a task,

We only have another wee bit to do, we can do this bit together and then we'll go and get to do something fun (Participant 5).

Parents highlighted the importance of taking a break from homework if their child is too tired or hungry or if continuing a task would lead to conflict. These simple strategies have been effective so far, one participant said that there has been,

A massive positive impact from such small changes (Participant 2).

The negative impact of "giving out" about mind-wandering was mentioned,

Giving out about it...it's just not helpful in any way (Participant 4).

### ***Parents Have Received Limited Formal Support in This Area***

Participants pointed out that they received limited formal support in the area of mind-wandering, with only two participants discussing issues around mind-wandering with their child's teacher. Nevertheless, parents reported that at present they felt confident in their ability to help their child stay on task. Schools shared general advice on how to support children to focus during school tasks, such as information on appropriate homework etiquette. When communicating with parents, teachers did not explicitly use the term "mind-wandering" and used phrases such as "daydreaming" and "being distractible". Participants observed that there is a lack of awareness of mind-wandering,

I kind of reflect in thinking that it's perhaps not on a lot of people's radars, even schoolteachers, because I think it is probably grouped together with being distracted and that's probably more of a focus (Participant 5).

Another participant highlighted how it would help parents to be

...supported in the view that mind-wandering is okay (Participant 3).

by teachers. Parents noted that it is important for parents to be made aware of different forms of inattention,

I thought of attention, but never really distinguished too much between the mind-wandering aspect and external attention" (Participant 1).

because

...different strategies will be helpful for different types of inattention (Participant 1).

Participants shared that other parents were,

...one of the biggest sources of support in general (Participant 4).

and that they learn strategies from others who have or had children of a similar age. One participant noted that talking to other parents helps her to decide

what is normal or what we might need to be a bit concerned about (Participant 5).

Parents receive information and support online from parenting forums and child education experts.

### ***Parents are Concerned About the Effectiveness of These Strategies in the Future***

Although parents are currently confident in supporting their children to stay focused and complete tasks, they voiced concerns over whether these strategies would be effective in the future. Participants worried that these strategies may not be effective when children have more challenging homework or a larger amount of it. One parent described:

I feel fine about it now, but I am worried about the future. At the moment most of the time I just physically am there, as I said, and subsequently I'm afraid that in the future that will turn into literally helicopter parenting, where you're literally hovering over the child to watch and make sure that the task gets done (Participant 6).

Parents voiced that they may need more support in this area in the future, and that they would like to have more information about mind-wandering, especially on negative consequences of mind-wandering,

It's probably having that knowledge you know, is it something that we should try to be supporting more or distracting away from? Will it impact the future? (Participant 5).

Another parent expressed her concern that her child would not receive adequate support unless they are diagnosed with ADHD in the future.

### **Parents' Frustration with Mind-Wandering Arises from Time Pressure**

Although parents' reaction to mind-wandering is generally positive, there is one instance when this is not the case. Parents often feel stressed or frustrated when their child's mind-wandering delays them when they are under time pressure,

It's just harder whenever you're under time pressure, that example that everyone's giving about trying to get out the door (Participant 5),

It takes longer, but I don't always have all the time in the world, so it can, make me sometimes a bit frustrated (Participant 3).

Parents' frustration in this area brought attention to how busy parents are because they have multiple scheduled activities,

We have to kind of have more expectations of them to...move along with the programme and move along with the schedule when all they want to do is go into imagination and go into play (Participant 6).

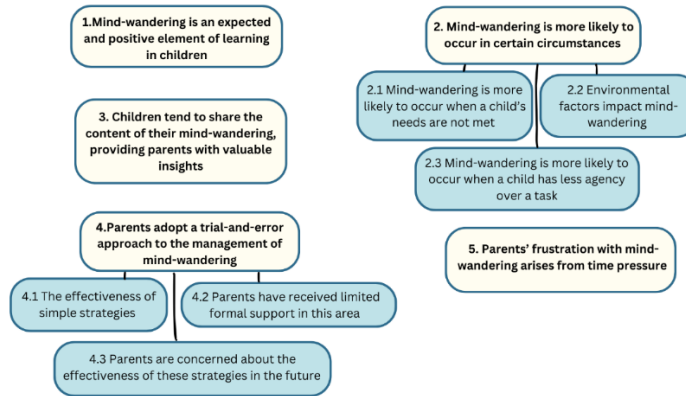
Parents alluded to additional pressures that they feel which were not present in previous generations,

..the pressure or the you know, the research that people have now... we put so much value on our children's development now and different stages of development and making sure that they're well rounded (Participant 3).

Parents described how it was difficult to achieve a balance in today's tightly scheduled culture, as they wish to avoid "nagging" their children to get tasks done. One parent described how they attempt to approach this,

So just to be flexible...you're not like the "task master" enforcing things to get done in the inner timeframe...the kids are the boss and they'll do it when they're well and ready to do it, hopefully anyway (Participant 6).

**Figure 1**  
Thematic Map



**Table 2**  
Additional Quotes

Theme	Representative Quotes
Mind-wandering is an expected and positive element of learning in children	'I'm hoping that my belief that it is not a bad thing for him to be doing is probably the key' (Participant 5) 'I think it's just a natural thing' (Participant 4) 'It develops imagination and creativity and they're learning by mind wandering and asking further questions on something that may be slightly related or unrelated' (Participant 6)
Mind-wandering is more likely to occur in certain circumstances	'When he's tired that's when he'll mind wander or when he's hungry' (Participant 6) 'I don't know if it's a little bit of boredom because when they choose the task, and it's something that they're interested in and it's educational, if it's chosen by them then they're less likely to mind-wander.' (Participant 3) Yeah, the same as was said there, when he's doing homework or playing and I suppose maybe the stimulus of something he sees some colour or some shape or some character that he sees will trigger him to make comments and start thinking about something maybe possibly related, but not directly on task and then just off an tangent on that. (Participant 6)
Children tend to share the content of their mind-wandering, providing parents with valuable insights	'Whatever it is that has popped into her head, she'll just start talking about it' (Participant 1) 'When something triggers her memory, she will tell a big story about lot of things that have happened, and you know of get an insight into her little world' (Participant 3) 'Listening to all their waffly little mundane kind of chats now will, you know, build up your relationship and give them the trust to want to speak to you about more, well what you view are more important issues in the future' (Participant 3).
Parents adopt a trial-and-error approach to the management of mind-wandering	'I think probably that's the thing that I would probably want as a parent to know. Is it something that would be detrimental if he does it more often, you know?' (Participant 5). 'If I notice that she was particularly tired, or upset, then I might just say "let's just leave that for now and take a break and come back to it", If I just thought she was just distracted, just chatting, then I might just try keep her on task.' (Participant 3) 'If I have the time to give it to her, that will really influence what strategy I use' (Participant 1).
Parents' frustration with mind-wandering arises from time pressure	'There's so many afterschool things to do and activities and even play dates and get-togethers and all of that, they're sort of constantly in the car ferried around, you know, in a way that we weren't at all' (Participant 2) 'So instead of getting dressed, he's been thinking...so that's fine, except for when we're under pressure to get out the door' (Participant 4)

### Conclusion and Discussion

The present study explores how parents of children in the first two years of formal education in Ireland view and manage their children's mind-wandering in relation to school tasks. To the best of the authors' knowledge, this is the first study to explore parents' perspectives of mind-wandering in typically developing children under the age of seven years old. Focus groups with parents revealed that they view mind-wandering as a typical and positive element of learning in children, and they have developed simple,

effective strategies through trial-and-error to manage their children's mind-wandering. Parents employ these strategies when they are under time pressure to complete a task, or when they perceive mind-wandering as having a negative impact on their children's learning. The results indicate that although parents of young children are presently confident in managing mind-wandering, the strategies they currently use may not continue to work effectively as their children progress through school. The results of the present study also displayed several intrinsic and extrinsic factors that influence mind-wandering in young learners and highlighted what parents view as advantageous and disadvantageous outcomes of mind-wandering. These key findings are discussed below, and the educational policy implications of these results are considered.

### **How Parents View Mind-Wandering**

Although parents had no previous knowledge of mind-wandering before taking part in this study, their view that mind-wandering is a typical and developmentally appropriate experience for children aligns with researchers' perspectives in this area (Cherry et al., 2022; Moffett & Morrison, 2020). The overarching opinion was that mind-wandering during school tasks, such as homework, is not presently a cause for concern for parents. In fact, parents highlighted several benefits of mind-wandering, such as how it is an opportunity for their children's minds to take a break. Previous research with adults has indicated that mind-wandering may serve as a restorative period for the brain between tasks (Godwin et al., 2017). A recent study found that alpha brain waves, that are associated with relaxing, were observed while participants engaged in mind-wandering (Kam et al., 2021). Another benefit of mind-wandering mentioned by parents was its perceived role in creativity; a finding noted in previous research with adult participants (Gericke et al., 2022; Pachai et al., 2016). Parents also described how mind-wandering promotes curiosity in their children and how it can lead to asking questions. Although these questions might be unrelated to the task, parents believe that their children are still learning. Previous research has demonstrated that learning still takes place when attention has shifted from the task at hand, with information acquired while off task often proving valuable for the completion of future tasks (Decker et al., 2023). Additionally, many parents noted that their children often link content in a task to their own experiences or interests, causing their minds to wander. Prior research has shown that associations often occur during mind-wandering, and the ability to associate information is valuable for creativity and problem solving (Olson et al., 2021; Russ, 2020). Another benefit of mind-wandering noted by parents was how mind-wandering allows their children to reflect and process past experiences. This process is called 'mental time-travel' and has been noted to occur during mind-wandering in eight- to fourteen-year-olds (Ye et al., 2014). The present study indicates that mental time-travel can also occur in younger children while mind-wandering. The findings in the present study indicate that although mind-wandering causes attention to shift from the task at hand, it may be the case that young learners can still learn and develop skills while mind-wandering.

A prominent observation by parents was that their children tend to share the content of their mind-wandering, giving parents unique insights into their children's experiences, worries and thought-processes. Parents value this aspect of mind-wandering and view it as an asset in supporting their children's mental health, while also viewing it as an opportunity to build their relationship with their child. This finding shows that parents' response to their children's mind-wandering could be an opportunity to build a trusting and supportive relationship with their child, helping their child to feel comfortable in sharing their experiences with them again in the future (Ulferts, 2020). Furthermore, parents explained how their children often talk about their interests or experiences in a rambling manner when they have deviated from a task. This is an interesting insight into how young children experience mind-wandering, and it may have developmental significance. From a Vygotskian perspective, children engage in egocentric self-talk - the direct, verbal expression of egocentric thought - between the ages of three and seven years old. After seven years old, egocentric self-talk declines and becomes internalised speech (Vygotsky, 1962). It is possible that participants' children engage in egocentric self-talk while mind-wandering, as they have not yet developed the ability to internalise speech. However, a recent study found that university students engage in both internalised speech and verbal self-talk while mind-wandering (Racy & Morin, 2024). Therefore, more research is needed to further explore the developmental factors that influence verbal self-

talk during mind-wandering, and whether the level of verbal self-talk during mind-wandering varies depending on developmental stage.

Although parents primarily had a positive view of their children's mind-wandering, they explained that they find it challenging and frustrating when they are under time pressure due to the busyness of modern life. It is interesting to note that recent research shows that it is becoming more common for parents to engage their children in structured activities, which can increase pressure on parents (Hickey & Lecky, 2021; Ulferts, 2020). Furthermore, parents of today struggle with competing priorities in their work and family lives, and feel increased pressure to be 'perfect' parents which causes additional stress (Hickey & Lecky, 2021; Nelson et al., 2014). Parents in the present study noted that they are more likely to discourage mind-wandering and redirect their child back to task when they are under time pressure. These findings illustrate how the busyness of modern life can influence parents' response to their children's mind-wandering, and it also highlights the pressures parents are currently experiencing. It is important to consider these pressures when developing supports for parents so that they can be delivered in the most constructive and accessible way, while avoiding additional pressure on parents.

It is worth noting that negative educational outcomes of mind-wandering outlined in previous research such as its negative impact on memory retention (Cherry et al., 2022), working memory, reading performance (Mooneyham & Schooler, 2013) and reading comprehension (Moffett & Morrison, 2020) did not arise in the focus group discussions. The majority of parents only reported what they saw as minor negative consequences of mind-wandering, such as homework taking longer to complete and slightly poorer quality homework. One participant commented on how mind-wandering negatively impacted her daughter's confidence in reading in school; however, this was quickly resolved with a change in homework routine. It is possible that negative aspects of mind-wandering reported in previous studies are not yet an issue for young children who are in their first two years of school. However, an alternative explanation could be that these negative educational outcomes may not yet be apparent to parents. Parents mostly commented on their children's mind-wandering in relation to homework which only amounted to approximately ten minutes per day, and they highlighted that they have limited insight into their children's mind-wandering behaviour at school. In addition, parents in the current study conveyed that building a relationship with their child and ensuring that their child is happy in school is more important than their child's academic performance at this time. This attitude suggests that the educational consequences of mind-wandering may not currently be a priority for parents. Nevertheless, it is important for parents to be aware of the potential negative consequences of mind-wandering, so that they can recognise if their child needs further support.

### **Factors that Impact Mind-Wandering in Children**

Participants reported several personal and environmental factors that contribute to higher levels of mind-wandering in their children. Hunger, tiredness and engaging in repetitive or monotonous tasks were reportedly associated with increased levels of mind-wandering. Previous research reported similar findings that associated tiredness with higher levels of mind-wandering in both typically developing children (Spruyt et al., 2019) and children diagnosed with sluggish cognitive tempo (Becker et al., 2022). Schools and policy makers can take steps to lessen the impact of these personal factors. For instance, some recent policy changes may indirectly reduce children's mind-wandering related to school tasks, such as the expansion of the Hot School Meals Programme in the Republic of Ireland and the Free School Meals Grants in Northern Ireland. Policies directed at reducing hunger and tiredness in young school children could lead to more engagement amongst students and make them less prone to mind-wandering during school tasks.

Participants noticed their children's minds wandered less when they engaged in tasks that aligned with their interests. This observation aligns with previous research which found that children with a greater interest in ancient Egypt scored higher on a memory test assessing their recall for contents of a story about Egypt (Cherry et al., 2022). Additionally, parents mentioned how their children experienced less mind-wandering when the children chose the time to do their homework. These findings indicate that children experience less mind-wandering when they have more agency over a task. Encouraging and

providing children with the space to explore their interests and approach school tasks in a way which suits them could promote children's engagement in school tasks. The incorporation of more child-centred frameworks that promote children's agency in their learning such as Aistear: The Early Childhood Curriculum Framework could be useful in fostering engagement with school content, while at the same time allowing for beneficial mind-wandering that extends learning through creativity and problem solving (Hines et al., 2019; Russ, 2020).

In addition to personal factors, participants identified environmental factors that contribute to mind-wandering. They noted that distracting or noisy environments increases mind-wandering during homework, as their children start thinking about these distractions and linking them to their own experiences. This aligns with a recent study, which found that children who experienced more mind-wandering were more likely to be affected by interference from noise (Massonnié et al., 2022). To address this issue, parents encourage their children to complete homework in quiet environments. This finding highlights that although distraction is a different form of inattention than mind-wandering, reducing distractions can help decrease mind-wandering during homework. Future research should consider whether socio-economic factors impact mind-wandering; this was beyond the scope of the current study, as no schools considered at an educational disadvantage were represented in the study.

Interestingly, technology and screen time were not mentioned during the focus groups. This is surprising, as changing family environments contain more technology and are likely to influence young children's development (Ulferts, 2020). The absence of technology in the environmental theme could indicate that participants' children may not be significantly impacted by screen time or technology. Nevertheless, these findings may not accurately represent the experience of all children of this age. Therefore, more research is needed to explore how screen time and technology in the home environment may impact levels of mind-wandering in children.

### **How Parents Manage Mind-Wandering**

Although parents in the present study give their children space to mind-wander where possible, they also recognise that it is sometimes necessary to redirect their child's mind from wandering. Parents approach their child's mind-wandering differently depending on the context, recognising that increased mind-wandering when their child is hungry or tired signifies that they need a break. Even though parents receive limited formal support in managing their children's mind-wandering, all parents had simple and effective strategies to regain their child's attention which they developed through trial-and-error. Strategies include re-direction and using their child's name to bring their focus back to task. These strategies were also used by parents of children diagnosed with sluggish cognitive tempo when their children's minds wandered (Becker et al., 2022). The strategies employed by parents in the current study largely rely on parents being present while their child completes homework. Although this is currently possible, it is unlikely that parents will remain physically present while their child completes homework as they progress through school. Furthermore, parents' constant presence during homework could prove to be problematic in the future and could lead to parents being overly involved (Ulferts, 2020). This highlights the importance of developing and providing parents with effective, evidence-based supports to help their child develop attentional skills. This can help to reduce the potential negative impact of mind-wandering in the future.

### **Strengths and Limitations**

A significant strength of this research was the involvement of key stakeholders across the island of Ireland at each stage of the study. This collaborative, co-creative approach meant the study could be developed with input from a parent representative, policy makers and researchers in both psychology and education. This optimised the relevance of the study, as well as the applicability of the findings (Schuiling & Kiewiet, 2016). Furthermore, the direct involvement of parents in this study meant that their perspectives and concerns could be represented in research, as they have not been well represented in the literature in this area until now. This makes it possible for supports to be developed with parents' stated needs at the forefront (Department of Children, Equality, Disability, Integration and Youth, 2022; Hickey & Lecky, 2021). Furthermore, the qualitative methodology and use of online focus groups allowed for rich insights

into parents' perspectives across a broad geographical range (Krueger, 2014).

However, the present study has a number of limitations. First, despite targeted efforts to recruit male participants, the sample consisted entirely of females. This was unfortunate, however somewhat unsurprising as fathers are typically difficult to recruit (Hickey & Lecky, 2021). Second, a more socio-economically diverse sample could have increased the generalisability of the findings. Furthermore, it is worth highlighting that the participants in the present study were all parents who had the time and resources that allowed them to take part in a two-hour focus group. Not all parents are in this position, indicating that the results may not represent all parents' opinions or perspectives. Although online focus groups allowed for participants across the island of Ireland to take part, one participant in the second focus group experienced connectivity issues that limited her ability to take part in the second half of the focus group. Lastly, despite targeted efforts to recruit participants from Northern Ireland, just one parent from Northern Ireland took part.

### **Future Directions and Conclusions**

Despite the aforementioned limitations, this study positively contributes to research on mind-wandering in young children by investigating parents' perspectives that have not been explored previously. This study focused on young children at an early stage of education (under 6-years-old) that was not previously represented in the literature. The findings give insight into how children of this age experience mind-wandering during school tasks, while also providing a foundation for future research in this specific age group. Although parents have been resourceful in developing strategies to manage their children's mind-wandering, parents could still benefit from more support in this area. In order to ensure that supports are accessible to all parents, it is most beneficial to build on support systems that are already established, such as in schools (Hickey & Lecky, 2021; Ulferts, 2020). However, in order for the school environment to be an effective information point for parents, teachers must be provided with up-to-date, evidence informed information on mind-wandering. In particular, the present study highlights that it is important for parents and teachers to be aware of the potential benefits of mind-wandering while also recognising when a child may need further support with their attentional skills, and how to best support them. Providing both parents and teachers with this information could help to cultivate an environment where all children are supported in their attentional skills, regardless of the presence of a developmental disorder diagnosis (Holmes et al., 2019).

Further research that identifies strategies to help manage young children's mind-wandering can help inform policies that focus on children's wellbeing in education, such as the Irish Wellbeing in Schools Policy Statement and Framework for Practice (Department of Education and Skills, 2018) - a policy for schools, children, parents/carers and other key stakeholders. This policy highlights that opportunities for children to develop their attention skills serves as a wellbeing protective factor in educational settings. Incorporating a balanced perspective of mind-wandering into early childhood education policies may help to cultivate a positive, supportive and accepting approach towards fostering children's attention skills at school and at home. However, to achieve this, more research is needed to investigate how young children can be best supported by their parents throughout their education, so that they can experience benefits of mind-wandering and mitigate the negative educational outcomes of mind-wandering. Furthermore, future research could aim to explore a more diverse sample of parents that include fathers. It would also be interesting to investigate how parents' perspectives of mind-wandering change as their child progresses through primary school, so that parents' and children's needs at all stages can be represented in research. To conclude, the present study provides a valuable contribution to research on how parents view and manage mind-wandering in young, typically developing children and opens avenues for further research as well as practical implications in the area of educational policy.

### **Declarations**

#### *Authors' Declarations*

*Acknowledgements:* The authors would like to thank all of the stakeholders who contributed to this project including Máirín Ní

Chéileachair, representative of the Irish National Teachers' Organisation, Thomas Moloney representative of the Teaching Council of Ireland, Patricia Davison, representative of the Education Authority of Northern Ireland and parent representative Joelle Hendrick. The authors would also like to thank the parents who participated in the study.

**Authors' contributions:** M.D., A.G, T.C, J.S. and J.McM. made substantial contributions to the conception of the research study and developed the study design. O.W. and M.F. gathered the data. O.W. took the lead in writing the manuscript and analysing the data. M.D. supervised the project. All authors provided critical feedback and helped shape the research, analysis and manuscript.

**Competing interests:** The authors declare that they have no competing interests.

**Funding:** This project is funded by a Taighde Éireann - Research Ireland New Foundations Grant in partnership with the Department of the Taoiseach as part of the Shared Island initiative.

**Ethics approval and consent to participate:** Ethical approval was obtained from the Taught Masters Research Ethics Committee, School of Psychology at University College Dublin in December, 2023. Participants gave their informed consent to take part in this research.

#### **Publisher's Declarations**

**Editorial Acknowledgement:** The editorial process of this article was completed under the editorship of Dr. Ibrahim H Acar through a double-blind peer review with external reviewers.

**Publisher's Note:** Journal of Childhood, Education & Society remains neutral with regard to jurisdictional claims in published maps and institutional affiliation.

## **References**

- Adler, K., Salanterä, S., & Zumstein-Shaha, M. (2019). Focus group interviews in child, youth, and parent research: an integrative literature review. *International Journal of Qualitative Methods*, 18, 1-15. <https://doi.org/10.1177/1609406919887274>
- Baird, B., Smallwood, J., & Schooler, J. W. (2011). Back to the future: Autobiographical planning and the functionality of mind-wandering. *Consciousness and Cognition*, 20(4), 1604–1611. <https://doi.org/10.1016/j.concog.2011.08.007>
- Baird, B., Smallwood, J., Mrazek, M. D., Kam, J. W., Franklin, M. S., & Schooler, J. W. (2012). Inspired by distraction: mind wandering facilitates creative incubation. *Psychological science*, 23(10), 1117–1122. <https://doi.org/10.1177/0956797612446024>
- Becker, S. P., Fredrick, J. W., Foster, J. A., Yeaman, K. M., Epstein, J. N., Froehlich, T. E., & Mitchell, J. T. (2022). "My mom calls it Annaland": A qualitative study of phenomenology, daily life impacts, and treatment considerations of sluggish cognitive tempo. *Journal of Attention Disorders*, 26(6), 915–931. <https://doi.org/10.1177/10870547211050946>
- Betts, J., McKay, J., Maruff, P., & Anderson, V. (2006). The development of sustained attention in children: The effect of age and task load. *Child Neuropsychology*, 12(3), 205–221. <https://doi.org/10.1080/09297040500488522>
- Blondé, P., Girardeau, J. C., Sperduti, M., & Piolino, P. (2022). A wandering mind is a forgetful mind: A systematic review on the influence of mind wandering on episodic memory encoding. *Neuroscience and Biobehavioral Reviews*, 132, 774–792. <https://doi.org/10.1016/j.neubiorev.2021.11.015>
- Bonifacci, P., Colombini, E., Marzocchi, M., Tobia, V., & Desideri, L. (2022). Text-to-speech applications to reduce mind wandering in students with dyslexia. *Journal of Computer Assisted Learning*, 38(2), 440-454. <https://doi.org/10.1111/jcal.12624>
- Bozhilova, N. S., Michelini, G., Kuntsi, J., & Asherson, P. (2018). Mind wandering perspective on attention-deficit/hyperactivity disorder. *Neuroscience and Biobehavioral Reviews*, 92, 464–476. <https://doi.org/10.1016/j.neubiorev.2018.07.010>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Buckner, R. L. (2013). The brain's default network: origins and implications for the study of psychosis. *Dialogues in Clinical Neuroscience*, 15(3), 351–358. <https://doi.org/10.31887/DCNS.2013.15.3/rbuckner>
- Bunce, D. M., Flens, E A., & Neiles, K. Y. (2010). How long can students pay attention in class? A study of student attention decline using clickers. *Journal of Chemical Education*, 87, 1438- 1443. <https://doi.org/10.1021/ed100409p>
- Cao, Z., Huang, Y., Song, X., & Ye, Q. (2022). Development and validation of children's mind wandering scales. *Frontiers in Public Health*, 10, 1054023. <https://doi.org/10.3389/fpubh.2022.1054023>
- Cherry, J., McCormack, T., & Graham, A. J. (2022). The link between mind wandering and learning in children. *Journal of Experimental Child Psychology*, 217, 105367. <https://doi.org/10.1016/j.jecp.2021.105367>
- Cherry, J., McCormack, T., & Graham, A. J. (2024). Listen up, kids! How mind wandering affects immediate and delayed memory in children. *Memory & Cognition*, 52(4), 909-925. <https://doi.org/10.3758/s13421-023-01509-0>
- Chu, M. T., Marks, E., Smith, C. L., & Chadwick, P. (2023). Self-caught methodologies for measuring mind wandering with meta-awareness: A systematic review. *Consciousness and Cognition*, 108, 103463. <https://doi.org/10.1016/j.concog.2022.103463>

- Ciaramelli, E., & Treves, A. (2019). A mind free to wander: Neural and computational constraints on spontaneous thought. *Frontiers in Psychology*, 10, 39. <https://doi.org/10.3389/fpsyg.2019.00039>
- Cofie, N., Braund, H., & Dalgarno, N. (2022). Eight ways to get a grip on intercoder reliability using qualitative-based measures. *Canadian Medical Education Journal*, 13(2), 73–76. <https://doi.org/10.36834/cmej.72504>
- Davis-Kean, P. E., Tighe, L. A., & Waters, N. E. (2021). The role of parent educational attainment in parenting and children's development. *Current Directions in Psychological Science*, 30(2), 186-192. <https://doi.org/10.1177/0963721421993116>
- Decker, A., Dubois, M., Duncan, K., & Finn, A. S. (2023). Pay attention and you might miss it: greater learning during attentional lapses. *Psychonomic Bulletin & Review*, 30, 1041–52. <https://doi.org/10.3758/s13423-022-02226-6>
- Department of Children, Equality, Disability, Integration and Youth (2022). *Supporting parents: A national model of parenting support services*. <https://assets.gov.ie/static/documents/supporting-parents-a-national-model-of-parenting-support-services.pdf>
- Department of Education and Skills (2018). *Wellbeing policy statement and framework 2018-2023*. Department of education and Skills. <https://www.gov.ie/en/department-of-education/campaigns/wellbeing-in-education/>
- Feruglio, S., Matiz, A., Pagnoni, G., Fabbro, F., & Crescentini, C. (2021). The impact of mindfulness meditation on the wandering mind: A systematic review. *Neuroscience and Biobehavioural Reviews*, 131, 131-330. <https://doi.org/10.1016/j.neubiorev.2021.09.032>
- Frank, J. L., Broderick, P. C., Oh, Y., Mitra, J., Kohler, K., Schussler, D. L., Geier, C., Roeser, R. W., Berrena, E., Mahfouz, J., Levitan, J., & Greenberg, M. T. (2021). The effectiveness of a teacher-delivered mindfulness-based curriculum on adolescent social-emotional and executive functioning. *Mindfulness*, 12(5), 1234–1251. <https://doi.org/10.1007/s12671-021-01594-9>
- Fredrick, J. W., Miller, M. C., Becker, S. P. (2025). Taming the wandering mind: Strategies for helping children and teens with cognitive disengagement syndrome. *Attention*, 12-15. [https://d393uh8gb46l22.cloudfront.net/wp-content/uploads/2025/02/ATTN\\_02\\_2025-Taming-the-Wandering-Mind.pdf](https://d393uh8gb46l22.cloudfront.net/wp-content/uploads/2025/02/ATTN_02_2025-Taming-the-Wandering-Mind.pdf)
- Frick, M. A., Asherson, P., & Brocki, K. C. (2020). Mind-wandering in children with and without ADHD. *The British Journal of Clinical Psychology*, 59(2), 208–223. <https://doi.org/10.1111/bjc.12241>
- Gericke, C., Soemer, A. & Schiefele, U. (2022). Benefits of mind wandering for learning in school through its positive effects on creativity. *Frontiers in Education* 7, 774731. <https://doi.org/10.3389/feeduc.2022.774731>
- Godwin, C. A., Hunter, M. A., Bezdek, M. A., Lieberman, G., Elkin-Frankston, S., Romero, V. L., Witkiewitz, K., Clark, V. P., & Schumacher, E. H. (2017). Functional connectivity within and between intrinsic brain networks correlates with trait mind wandering. *Neuropsychologia*, 103, 140–153. <https://doi.org/10.1016/j.neuropsychologia.2017.07.006>
- Gozpinar, N., Cakiroglu, S., & Gormez, V. (2023). Sluggish cognitive tempo self report scale (SCT-SR): Development and initial validation study. *Journal of Attention Disorders*, 27(5), 510–520. <https://doi.org/10.1177/10870547231153879>
- Hasan, F., Hart, C. M., Graham, S. A., & Kam, J. W. Y. (2024). Inside a child's mind: The relations between mind wandering and executive function across 8- to 12-year-old. *Journal of Experimental Child Psychology*, 240, 105832. <https://doi.org/10.1016/j.jecp.2023.105832>
- Hennink, M., & Kaiser, B. N. (2022). Sample sizes for saturation in qualitative research: A systematic review of empirical tests. *Social Science & Medicine*, 292, 114523. <https://doi.org/10.1016/j.socscimed.2021.114523>
- Hickey, G. & Lecky, Y. (2021). *Irish parents' experiences of support and parenting support services, report prepared for the Department of Children, Equality, Disability, Integration and Youth*. <https://www.gov.ie/en/organisation-information/eb017-developing-anational-model-of-parenting-support-services/#research-papers>
- Hines, M. E., Catalana, S. M., & Anderson, B. N. (2019). When learning sinks in: Using the incubation model of teaching to guide students through the creative thinking process. *Gifted Child Today*, 42(1), 36-45. <https://doi.org/10.1177/1076217518804858>
- Holmes, J., Bryant, A., CALM Team, & Gathercole, S. E. (2019). Protocol for a transdiagnostic study of children with problems of attention, learning and memory (CALM). *BMC Pediatrics*, 19(1), 10. <https://doi.org/10.1186/s12887-018-1385-3>
- Hughes, C. & Devine, R. T. (2019). For better or for worse? Positive and negative parental influences on young children's executive function. *Child Development*, 90, 593-609. <https://doi.org/10.1111/cdev.12915>
- Irish Department of Children, Disability and Equality (2021). *Access and inclusion model: Attention and listening ideas to support younger children*. <https://aim.gov.ie/app/uploads/2021/05/attention-and-listening-ideas-to-support-younger-children.pdf>
- Junod, R. V., Dupaul, G. J., Jitendra, A. K., Volpe, R. J., & Cleary, K. S. (2006). Classroom observations of students with and without ADHD: Differences across types of engagement. *Journal of School Psychology*, 44, 87–104. <http://dx.doi.org/10.1016/j.jsp.2005.12.004>
- Kam, J. W. Y., Rahnuma, T., Park, Y. E., & Hart, C. M. (2022). Electrophysiological markers of mind wandering: A systematic review. *NeuroImage*, 258, 119372. <https://doi.org/10.1016/j.neuroimage.2022.119372>
- Kam, J. W., Irving, Z. C., Mills, C., Patel, S., Gopnik, A., & Knight, R. T. (2021). Distinct electrophysiological signatures of task-

- unrelated and dynamic thoughts. *Proceedings of the National Academy of Sciences*, 118(4), e2011796118. <https://doi.org/10.1073/pnas.2011796118>
- Keulers, E. H. H., & Jonkman, L. M. (2019). Mind wandering in children: Examining task-unrelated thoughts in computerized tasks and a classroom lesson, and the association with different executive functions. *Journal of Experimental Child Psychology*, 179, 276–290. <https://doi.org/10.1016/j.jecp.2018.11.013>
- Killingsworth, M. A., & Gilbert, D. T. (2010). A wandering mind is an unhappy mind. *Science*, 330(6006), 932. <https://doi.org/10.1126/science.1192439>
- Koskulu-Sancar, S., Van de Weijer-Bergsma, E., Mulder, H., & Blom, E. (2023). Examining the role of parents and teachers in executive function development in early and middle childhood: A systematic review. *Developmental Review*, 67, 101063. <https://doi.org/10.1016/j.dr.2022.101063>
- Krueger, R. A. (2014). *Focus groups: A practical guide for applied research*. Sage.
- Liu, Y., Sulaimani, M. F., & Henning, J. E. (2020). The significance of parental involvement in the development in infancy. *Journal of Educational Research and Practice*, 10, 161–166. <https://doi.org/10.5590/JERAP.2020.10.1.11>
- Lobe, B. (2017). Best practices for synchronous online focus groups. In Barbour R. S., Morgan D. L. (Eds.), *A new era in focus group research: Challenges, innovation and practice* (pp. 227–250). Palgrave Macmillan. [https://doi.org/10.1057/978-1-137-58614-8\\_11](https://doi.org/10.1057/978-1-137-58614-8_11)
- Lobe, B., Morgan, D., & Hoffman, K. A. (2020). Qualitative data collection in an era of social distancing. *International Journal of Qualitative Methods*, 19, 1-8. <https://doi.org/10.1177/1609406920937875>
- Massonnié, J., Frassetto, P., Mareschal, D., & Kirkham, N. Z. (2022). Learning in noisy classrooms: Children’s reports of annoyance and distraction from noise are associated with individual differences in mind-wandering and switching skills. *Environment and Behavior*, 54(1), 58-88. <https://doi.org/10.1177/0013916520950277>
- McCormack, T., Burns, P., O’Connor, P., Jaroslawska, A., & Caruso, E. M. (2019). Do children and adolescents have a future-oriented bias? A developmental study of spontaneous and cued past and future thinking. *Psychological Research*, 83(4), 774–787. <https://doi.org/10.1007/s00426-018-1077-5>
- Mermelshstine, R. (2017). Parent–child learning interactions: A review of the literature on scaffolding. *British Journal of Educational Psychology*, 87(2), 241-254. <https://doi.org/10.1111/bjep.12147>
- Merrill, B. M., Raiker, J. S., Mattfeld, A. T., Macphee, F. L., Ramos, M. C., Zhao, X., Altszuler, A. R., Schooler, J. W., Coxe, S., Gnagy, E. M., Greiner, A. R., Coles, E. K., & Pelham, W. E., Jr (2022). Mind-wandering and childhood ADHD: Experimental manipulations across laboratory and naturalistic settings. *Research on Child and Adolescent Psychopathology*, 50(9), 1139–1149. <https://doi.org/10.1007/s10802-022-00912-6>
- Moffett, L., & Morrison, F. J. (2020). Off-task behavior in kindergarten: Relations to executive function and academic achievement. *Journal of Educational Psychology*, 112(5), 938–955. <https://doi.org/10.1037/edu0000397>
- Mooneyham, B. W., & Schooler, J. W. (2013). The costs and benefits of mind-wandering: a review. *Canadian Journal of Experimental Psychology = Revue Canadienne de Psychologie Experimentale*, 67(1), 11–18. <https://doi.org/10.1037/a0031569>
- Mrazek, M. D., Franklin, M. S., Phillips, D. T., Baird, B., & Schooler, J. W. (2013). Mindfulness training improves working memory capacity and GRE performance while reducing mind wandering. *Psychological Science*, 24(5), 776–781. <https://doi.org/10.1177/0956797612459659>
- Nelson, S. K., Kushlev, K., & Lyubomirsky, S. (2014). The pains and pleasures of parenting: When, why, and how is parenthood associated with more or less well-being? *Psychological Bulletin*, 140(3), 846-895. <https://doi.org/10.1037/a0035444>
- O’Brien, B. C., Harris, I. B., Beckman, T. J., Reed, D. A., & Cook, D. A. (2014). Standards for reporting qualitative research: a synthesis of recommendations. *Academic Medicine*, 89(9), 1245–1251. <https://doi.org/10.1097/ACM.0000000000000388>
- Olson, J. A., Nahas, J., Chmoulevitch, D., Cropper, S. J., & Webb, M. E. (2021). Naming unrelated words predicts creativity. *Proceedings of the National Academy of Sciences of the United States of America*, 118(25), e2022340118. <https://doi.org/10.1073/pnas.2022340118>
- Pachai, A., Acai, A., LoGiudice, A., & Kim, J. (2016). The mind that wanders: Challenges and potential benefits of mind wandering in education. *Scholarship of Teaching and Learning in Psychology*, 2(2), 134-146. <https://doi.org/10.1037/stl0000060>
- Posner, M. I., Rothbart, M. K., Sheese, B. E., & Voelker, P. (2014). Developing attention: Behavioral and brain mechanisms. *Advances in Neuroscience*, 2014, 405094. <https://doi.org/10.1155/2014/405094>
- Racy, F., & Morin, A. (2024). Relationships between self-talk, inner speech, mind wandering, mindfulness, self-concept clarity, and self-regulation in university students. *Behavioral Sciences*, 14(1), 55. <https://doi.org/10.3390/bs14010055>
- Risko, E. F., Anderson, N., Sarwal, A., Engelhardt, M., & Kingstone, A. (2012). Everyday attention: variation in mind wandering and memory in a lecture. *Applied Cognitive Psychology*, 26(2), 234–242.
- Roulston, S., Brown, M., Taggart, S., & Eivers, E. (2023). A century of growing apart and challenges of coming together: Education across the island of Ireland. *Irish Studies in International Affairs*, 34(2), 78-121. <https://doi.org/10.1353/isia.2023.a899832>

It's just their mind taking a break when it needs to': How parents...

- Russ, S. W. (2020). Mind wandering, fantasy, and pretend play: A natural combination. In Preiss, D. D., Cosmelli, D. & Kaufman, J. C. (Eds.), *Creativity and the wandering mind* (pp. 231–248). Academic Press. <https://doi.org/10.1016/B978-0-12-816400-6.00010-9>
- Schooler, J. W., Mrazek, M. D., Franklin, M. S., Baird, B., Mooneyham, B. W., Zedelius, C., & Broadway, J. M. (2014). The middle way: Finding the balance between mindfulness and mind-wandering. *Psychology of Learning and Motivation*, 60, 1-33. <https://doi.org/10.1016/B978-0-12-800090-8.00001-9>
- Schuling, G., & Kiewiet, D. J. (2016). Action Research: Intertwining three exploratory processes to meet the competing demands of rigour and relevance. *Electronic Journal of Business Research Methods*, 14(2), 111-124.
- Seli, P., Kane, M. J., Smallwood, J., Schacter, D. L., Maillet, D., Schooler, J. W., & Smilek, D. (2018). Mind-wandering as a natural kind: A family-resemblances view. *Trends in Cognitive Sciences*, 22(6), 479–490. <https://doi.org/10.1016/j.tics.2018.03.010>
- Slattery, E. J., O'Callaghan, E., Ryan, P., Fortune, D. G., & McAvinue, L. P. (2022). Popular interventions to enhance sustained attention in children and adolescents: A critical systematic review. *Neuroscience and Biobehavioral Reviews*, 137, 104633. <https://doi.org/10.1016/j.neubiorev.2022.104633>
- Soemer, A., Idsardi, H. M., Minnaert, A., & Schiefele, U. (2019). Mind wandering and reading comprehension in secondary school children. *Learning and Individual Differences*, 75, 101778. <https://doi.org/10.1016/j.lindif.2019.101778>
- Spruyt, K., Herbillon, V., Putois, B., Franco, P., & Lachaux, J. P. (2019). Mind-wandering, or the allocation of attentional resources, is sleep-driven across childhood. *Scientific Reports*, 9(1), 1269. <https://doi.org/10.1038/s41598-018-37434-5>
- Szpunar, K. K., Khan, N. Y., & Schacter, D. L. (2013). Interpolated memory tests reduce mind wandering and improve learning of online lectures. *Proceedings of the National Academy of Sciences*, 110(16), 6313-6317. <https://doi.org/10.1073/pnas.1221764110>
- Ulferts, H. (2020). Why parenting matters for children in the 21st century: *An evidence-based framework for understanding parenting and its impact on child development*. OECD Education Working Papers, No. 222, OECD Publishing, Paris. <https://doi.org/10.1787/129a1a59-en>
- Usmanovna, A. N. (2021). The role of parents in the upbringing of children. *ACADEMICIA: An International Multidisciplinary Research Journal*, 11(10), 1995-1999. <https://doi.org/10.5958/2249-7137.2021.01665.7>
- Van den Driessche, C., Bastian, M., Peyre, H., Stordeur, C., Acquaviva, É., Bahadori, S., Delorme, R., & Sackur, J. (2017). Attentional lapses in attention-deficit/hyperactivity disorder: Blank rather than wandering thoughts. *Psychological Science*, 28(10), 1375-1386. <https://doi.org/10.1177/0956797617708234>
- Vygotsky, L. (1962). *Thought and language*. MIT press. <https://doi.org/10.1037/11193-000>
- Wilson, M., Sosa-Hernandez, L., & Henderson, H. A. (2022). Mind wandering and executive dysfunction predict children's performance in the metronome response task. *Journal of Experimental Child Psychology*, 213, 105257. <https://doi.org/10.1016/j.jecp.2021.105257>
- Wood, D., Bruner, J., & Ross, G. (1976). The role of tutoring in problem solving. *Journal of Child Psychology and Child Psychiatry*, 17, 89–100. <https://doi.org/10.1111/j.1469-7610.1976.tb00381.x>
- Ye, Q., Song, X., Zhang, Y., & Wang, Q. (2014). Children's mental time travel during mind wandering. *Frontiers in Psychology*, 5, 927. <https://doi.org/10.3389/fpsyg.2014.00927>
- Zhang, Y., Song, X., Ye, Q., & Wang, Q. (2015). Children with positive attitudes towards mind-wandering provide invalid subjective reports of mind-wandering during an experimental task. *Consciousness and Cognition*, 35, 136-142. <https://doi.org/10.1016/j.concog.2015.05.006>

# Language outcomes in high-risk Hawaiian children at *Ka Pa'alana*: A family-child interaction learning program

Priscilla Grunauer<sup>1</sup>, Francys Subiaul<sup>2</sup>

**Abstract:** The importance of high-quality early childhood education programs in young children's learning outcomes is well established. However, minority and Indigenous children are widely underrepresented in these programs. Early childhood education programs that implement culture-based education and encourage family partnerships are designed to support Indigenous children and their families. One such program is *Ka Pa'alana* Homeless Family Education Program and Preschool, a Family-Child Interaction Learning program in Hawai'i, created to support Native Hawaiian families who historically experienced homelessness and poor educational outcomes. Here, we evaluated the efficacy of literacy and language professional development for program educators by examining associated language outcomes in a sample of Native Hawaiian preschool-age children (N=45) from a low-socioeconomic, high-risk community. Results revealed significant improvements in both expressive and receptive language, as measured by the formative GOLD® assessment system and the standardized Peabody Picture Vocabulary Test, 5th edition. Compared to other similar programs serving low-socioeconomic-status minority populations, children enrolled in *Ka Pa'alana* demonstrated higher language scores. Given the small sample sizes and lack of control groups, results should be viewed as exploratory. Nonetheless, this study serves as an initial examination of the potential outcomes associated with *Ka Pa'alana* educators' language and literacy professional development, *Ka Pa'alana*'s Family-Child Interaction Learning program model and its Hawaiian culture-based education approach to promoting language development, and fostering cultural appreciation in a diverse, at-risk community.

## Article History

Received: 14 March 2025

Accepted: 25 December 2025

## Keywords

Family-child interaction learning program; Hawaiian culture-based curriculum; Early childhood education; Preschool language development

## Introduction

Various studies have consistently highlighted disparities in Native Hawaiian ("Hawaiians," hereafter) educational outcomes, particularly in reading and language performance (Collins, 2010; Kana'iaupuni & Ishibashi, 2003; Kana'iaupuni et al., 2010; Singh et al., 2014). The educational well-being of children in Hawai'i ranks in the bottom third among states (Hawai'i Children's Action Network, 2022). A 2023 state report showed that fewer than one-third of children entering kindergarten were behind in language, math, physical development, and social skills (Armstrong, 2023). Alarming, no schools across the islands reported full readiness in language and literacy. A 2024 state report found that less than one-third of children entering kindergarten in Hawai'i do not meet the expected academic skills and knowledge for kindergarten entry (Hawai'i State Department of Education, 2024). These reports underscore the importance of ensuring Hawai'i's young children develop adequate language skills before kindergarten, as language development is a strong predictor of later academic and social success (Armstrong, 2023; Morgan et al., 2015).

Proposed factors contributing to this achievement gap include higher rates of poverty, domestic violence, and criminal activity experienced by Hawaiians as a minority group compared to other ethnic and socioeconomic communities in Hawai'i (Kana'iaupuni et al., 2010; Singh et al., 2014). The correlation

<sup>1</sup> George Washington University, Department of Anthropology: Center for the Advanced Study of Human Paleobiology, Washington, D.C., United States, e-mail: [priscilla.grunauer@gwu.edu](mailto:priscilla.grunauer@gwu.edu), ORCID: <https://orcid.org/0009-0001-8956-8174>

<sup>2</sup> George Washington University, Department of Speech, Language, and Hearing Sciences, Washington, D.C., United States, e-mail: [subiaul@gwu.edu](mailto:subiaul@gwu.edu), ORCID: <https://orcid.org/0000-0002-5873-9524>

between children from disadvantaged households and low school performance compared to children from more advantaged households is well-documented (Campbell et al., 2008; Finneran et al., 2020; Ladd, 2012), with young children from minority communities at an increased risk of poor academic outcomes (Finneran et al., 2020; Wood et al., 2016). Hawaiian children and other indigenous groups, however, are widely underrepresented in such studies (Kitson & Bowes, 2010; Singh et al., 2014). *Ka Pa'alana* Homeless Family Education program is a Family-Child Interaction Learning program (FCIL) that incorporates Hawaiian culture-based education (CBE) to provide a culturally relevant learning environment for children and their families. *Ka Pa'alana* was specifically created to address the educational and socioeconomic gap experienced by Hawaiian communities. *Ka Pa'alana* has numerous mobile preschool sites and outreach services for homeless and at-risk families in Hawai'i. At *Ka Pa'alana*, families receive food, supplies, and support services from local shelters, parenting classes, and other community resources. The program's unifying factor emphasizes the importance of *'ohana* (family) in the Hawaiian community.

### **What is a Family-Child Interaction Learning Program (FCIL)?**

*Ka Pa'alana* is a FCIL program inspired by and adapted from the four-component framework for family literacy developed by the National Center for Families Learning (Jacobs et al., 2019). These components include (1) supporting caregivers as their child's first teacher through adult education, (2) early childhood education, (3) parent training, and (4) parent and child classroom engagement (Jacobs et al., 2019). This integration is accomplished through the *Ka Pa'alana's* program structure, which characteristically features "Parent and Children Together" (PACT), a designated time when caregivers engage with their children in various learning centers and outdoor activities, intentionally designed to be child-led and play-based. FCIL programs provide an alternative early childhood education setting in which caregivers remain with their children in the classroom, as opposed to traditional drop-off child care or preschool centers (DeBaryshe et al., 2017). FCIL programs serve families of children from birth through age five who are cared for by a designated caregiver. Recognizing the importance of parental involvement in children's education, FCIL programs are designed to support families in their role as a child's first and primary teachers. Families attend class together, typically twice a week for half a day, and enrollment in the program is free.

A central feature of FCIL programs is their dual focus on parent education and child development (DeBaryshe et al., 2017). This is reflected in the program's structure, which includes a parent education class where caregivers learn topics such as parenting, child development, job readiness, and other relevant subjects. While caregivers attend their parenting class, children participate in a preschool class (which can be a multi-age blend or divided by age group) and are taught by an accredited preschool teacher using a developmentally appropriate curriculum. FCIL programs aim to support vulnerable families, including low-income, immigrants, or those experiencing homelessness (DeBaryshe et al., 2017). The programs primarily rely on federal grants and other awards to remain operational.

While FCIL programs have not been specifically described in the ECE literature, their framework has been conceptualized by two-generation programs (Chase-Lansdale & Brooks-Gunn, 2014; Schmit et al., 2014; Smith, 1995; St. Pierre et al., 1995). The concept was introduced by the 1965 launch of Head Start, an early childhood education program specifically designed to serve low-socioeconomic-status minority populations (U.S. Department of Health and Human Services, Administration for Children and Families 2010). Two-generation programs are intended for low-income parents and children from the same family, aiming to integrate families into their children's education while also working to improve their own livelihoods (Chase-Lansdale & Brooks-Gunn, 2014; Schmit et al., 2014). Services for parents may include parenting, literacy, English language learning, and General Education Development (GED) preparation, among other opportunities (Chase-Lansdale & Brooks-Gunn, 2014; Schmit et al., 2014). Participation in two-generation programs is associated with improvements across developmental domains in children, enhanced parental psychosocial outcomes, and a decreased risk of child maltreatment (Benzies et al., 2014; St. Pierre et al., 1995; Urban Institute, 2024).

Similarly, *complementary learning* is a conceptual framework developed by the Harvard Family

Research Project (Henderson & Mapp, 2002; Temkin, 2006; Weiss, 2014). It is guided by the principle that family involvement in their children's education positively influences their social and academic outcomes. Its efficacy in supporting child learning outcomes is widely documented (Anderson, 2000; Henderson & Mapp, 2002; Scott-Jones, 1995; Weiss, 2014). Family involvement includes parent participation in child-centered activities, forming partnerships with their children's schools and educators, and taking responsibility for children's learning outcomes (Temkin, 2006). In early childhood, this responsibility often focuses on how parents can support children's language and literacy development. Studies show that children who are read to at home by their parents develop letter recognition and writing skills more rapidly (Nord et al., 2000; Temkin, 2006). *Ka Pa'alana's* curriculum is informed by this research and places particular emphasis on language and literacy development. To support this, the program provides language and literacy professional development for educators to improve their language instruction with children. *Ka Pa'alana* also provides professional literacy and language workshops for families, where caregivers are taught language and literacy strategies and receive free books to read with their children.

At its core, two-generation programs and complementary learning emphasize that the well-being of caregivers and children is inextricably linked, and their presence in each other's lives complements each other's success (Benzies et al., 2014; Schmit et al., 2014). The originality of *Ka Pa'alana* FCIL program stems from how Hawaiian values—which are centered on *'ohana* (family) and extended communal support—structure the program, its incorporation of Hawaiian CBE, and how the program scaffolds children's life experiences in their education, which have been shaped by Hawaiian and local culture.

#### **A Sociocultural Framework: *Ka Pa'alana's* FCIL Program Structure and Hawaiian Culture-Based Education (CBE)**

CBE pedagogy integrates Indigenous history, language, knowledge, values, and norms into educational systems in culturally appropriate ways (Demmert, 2011; Kana'iaupuni, 2007). CBE programs will vary by community to reflect the diverse needs of different Indigenous student groups (Demmert, 2011). CBE is vital to the cultural identity of Indigenous groups who struggle to find connection in a decontextualized, homogenous curriculum that does not reflect their cultures or lived experiences (Christman et al., 2008; Demmert, 2011). Early childhood education programs that implement CBE and encourage family partnerships are designed to support Indigenous children and their families (Kana'iaupuni, 2007).

Hawaiian families have traditionally favored informal home care provided by relatives or family friends. The arrival of New England Missionaries in the early 1800s and the illegal overthrow of the Hawaiian Monarchy by the U.S. in 1893 culturally restructured this system. Traditional family care shifted to more "formal" education, and replaced Hawaiian culture, language, and identity with Anglo-Saxon language and values (Grace & Serna, 2013; Kaiwi & Kahumoku, 2006). 21st-century school reforms shifted Hawaiian and other low-income children from their "at-risk" homes into "high-quality, formal" early education programs, with purportedly better academic outcomes (Grace & Serna, 2013; Kaomea, 2005). However, these programs continued to lack representation of Hawaiian culture in the classroom (Grace & Serna, 2013). In response, community efforts have been made to revive Hawaiian cultural identity by implementing Hawaiian CBE programs and involving families in their children's cultural education (Kana'iaupuni, 2004; Kana'iaupuni et al., 2010; Yamauchi et al., 2008). 'Ōlelo Hawai'i (the Hawaiian language) and/or English are spoken in these programs (Grace & Serna, 2013; Kana'iaupuni et al., 2010; Yamauchi et al., 2008).

*Ka Pa'alana's* FCIL program model incorporates a Hawaiian culture-based curriculum, which reflects the Hawaiian cultural value of *'ohana* (family) in children's learning. As part of their CBE curriculum, families engage in culture-based activities (e.g., poi pounding, cultivating taro, fishing), learn and use 'Ōlelo Hawai'i, learn Hawaiian values such as "*Aloha*" (love and compassion), "*Mālama*" (to care for), and "*Lōkahi*" (unity), and visit cultural history sites. Research shows that family environments rich in Hawaiian cultural traditions and values enhance children's early learning experiences (Kana'iaupuni, 2004; Kana'iaupuni & Else, 2005). Additionally, prior research shows that CBE improves academic outcomes,

including math and reading, among middle and high school students (Kana'iaupuni et al., 2010). While some studies have described Hawaiian CBE in early childhood programs in Hawai'i, no studies have explored its potential influence on child developmental outcomes, such as language development (Grace & Serna, 2012; Schonleber, 2011). Evaluating *Ka Pa'alana's* FCIL program model, which incorporates Hawaiian CBE, is particularly timely. This is due to the ongoing disparities in access to early childhood education for Hawaiian children and the renewed interest in culturally responsive, family-centered interventions in early learning (Collins, 2010; Hawai'i Children's Action Network, 2022; Kana'iaupuni & Ishibashi, 2003; Kana'iaupuni et al., 2010; Singh et al., 2014).

FCIL programs that use a culture-based education curriculum inherently reflect Vygotsky's socio-cultural theory, which places education between an individual and culture (Vygotsky, 1978, 1986). This framework posits that a child's mental and educational development is shaped by the social, cultural, and historical context in which they are embedded. Their learning begins through interaction with their broader social world, like more knowledgeable peers, parents, and teachers (Blake & Pope, 2008; Daniels, 2001; Panhwar et al., 2016; Polly et al., 2017; Vygotsky, 1978, 1986). This study will evaluate *Ka Pa'alana* FCIL program structure in the broader context of socio-cultural theory and learning.

This study assessed the efficacy of literacy and language professional development of *Ka Pa'alana's* educators by examining the associated language outcomes in Hawaiian children enrolled in the program. Here, we will also consider how other program elements, such as the FCIL program model and CBE curriculum, may contribute to measurable language development in children. By evaluating *Ka Pa'alana* within this theoretical framework, we investigate how teaching practices scaffold language development in a program that considers and incorporates the cultural and historical context of Hawaiian children.

### **The Importance of Oral Language in Hawaiian Communities**

Oral language is a central component of Hawaiian culture. *Mo'olelo* is the oral storytelling tradition of ancient Hawai'i, which passes down knowledge and history across generations. It encompasses narratives with rich descriptions, from the telling of myths and legends to instruction for Polynesian ocean navigation, all of which relied solely on memory (De Silva & Hunter, 2021; Lilomaiava-Doktor, 2020). Oral storytelling has persisted in Hawaiian and local communities, now colloquially referred to as "Talk Story," which involves sharing personal stories and experiences with friends, family, and members of one's community. This cultural Indigenous speech event is a deeply rooted Hawaiian tradition that fosters connection, community, and the preservation of oral history (De Silva & Hunter, 2021). It is such a central feature of local communication that its implementation in school curricula has been associated with increased reading achievement (Au, 1980).

Another linguistic element of Hawaiian and local communities is the local dialect of Hawai'i Creole English (HCE), commonly referred to as Pidgin (Collins, 2010; Yamauchi et al., 2024). Like other non-mainstream English dialects, Pidgin has its own dialect and grammatical structure, incorporating elements from Hawaiian and Pidgin English, as well as meanings from diverse sources (Collins, 2010; Da Pidgin Coup, 1999; Yamauchi et al., 2024). Following the illegal overthrow of the Hawaiian Monarchy, the Hawaiian language was banned in schools, leading to a decline in use and fluency among subsequent generations (Wilson & Kamanā, 2006; Yamauchi et al., 2024). In its place, Pidgin became the most common language form for families of Hawaiian descent and other local ethnic groups (Collins, 2010; Yamauchi et al., 2024). Today, Pidgin serves as a marker of local identity and is spoken as a means of connecting local people to one another and to Hawai'i (Eades et al., 2006; Da Pidgin Coup, 1999; Yamauchi et al., 2024).

Although oral language is a crucial component of Hawaiian history and culture, few studies have assessed early language development in Hawaiian preschool children (DeBaryshe & Gorecki, 2005; Martini, 2005; Sumida & Gillespie, 1985).

### **Assessing *Ka Pa'alana* Children's Language Outcomes**

Hawaiian and other local children (i.e., children who are not of Hawaiian descent but have grown up in Hawai'i) are immersed in these cultural language events, reflecting Vygotsky's theory of sociocultural

learning and communication (Vygotsky, 1978, 1986; Yamauchi et al., 2024). Because oral language is a central feature of Hawaiian culture, families traditionally engage in storytelling and conversational practices with their children. As a result, children in Hawaiian and local communities enter early childhood programs with culturally grounded experiences in oral communication (Lilomaiva-Doktor, 2020; De Silva & Hunter, 2021). *Ka Pa'alana* builds on this foundation by using evidence-based oral language and literacy strategies to scaffold children's existing language knowledge. This provides an opportunity to examine whether program implementation fosters measurable growth in children's language skills.

*Ka Pa'alana* is partially funded by the 2019-2024 Comprehensive Literacy State Development grant. Hawai'i's Department of Education was awarded funds to execute the grant; *Ka Pa'alana* was specifically involved in the Early Literacy Project (birth to age five) within the grant. This project aims to develop young children's language and literacy skills, thereby better preparing them for kindergarten and subsequent education. The Early Literacy Project focuses on professional development, instructional coaching, parent coaching, family engagement, and culture-based learning. *Ka Pa'alana*'s preschool teachers, parent educators, and caregivers receive training in evidence-based literacy and language strategies, including learning dialogic reading, phonological awareness, and alphabet knowledge (Lonigan & Shanahan, 2010).

Minority children, particularly Indigenous children, in high-risk communities who have a documented history of educational achievement gaps are widely underrepresented in early childhood education efforts and research (Guiberson & Vining, 2023; Loeb & Bassok, 2012). Government-funded early childhood education programs like Head Start, a two-generation program, were created to improve access to early childhood education for minority children (Finneran et al., 2020). However, ECE programs incorporating Indigenous knowledge and culture remain limited (Kitson & Bowes, 2010). To date, no studies have measured the language development of Hawaiian children in an FCIL preschool program that uses a CBE curriculum.

It is crucial for ECE programs to assess their effectiveness, if any, on the participants in the program, especially programs that serve marginalized Indigenous children. Here, we examined the language outcomes of Hawaiian and other minority children enrolled in *Ka Pa'alana* Homeless Family Education Program who live in the Wai'anae community—a community considered high-risk on the island of O'ahu (Okiihiro et al., 2014). We also compared *Ka Pa'alana*'s children's PPVT scores with those from similar childhood education programs (e.g., Head Start and community-based preschools). Our research aims were as follows:

1) If *Ka Pa'alana* educators are implementing oral language and literacy strategies with fidelity, then an increase in children's language progress is expected. To test these expectations, we measured differences in language proficiency levels from the beginning to the end of one year of attendance (e.g., Fall 2022/2023 to Spring 2022/2023) at *Ka Pa'alana*. We also measured differences in children's Peabody Picture Vocabulary Test (PPVT) scores, a standardized assessment of children's receptive vocabulary (Dunn & Dunn, 1981), from October 2022 to September 2023.

2) To assess how *Ka Pa'alana*'s children's PPVT scores compared to similar early childhood education programs that serve minority children in high-risk communities.

To our knowledge, this is also the first paper to describe FCIL programs in the early childhood education literature.

## Method

### Participants

The researchers did not directly recruit or interact with the program's participants. *Ka Pa'alana* routinely collects standardized assessment data on children's language development as part of its internal monitoring and reporting to program funders. This study involved a retrospective analysis of *Ka Pa'alana*'s existing dataset of children's language scores, which was provided to the research team in de-identified form to ensure anonymity and confidentiality. The George Washington University Institutional Review

Board (IRB) reviewed our study and determined that it did not meet the definition of human subjects research. It therefore did not require IRB approval or participant consent.

We assessed language development using two different measures in two independent groups of children. The *Hawaiian Longitudinal Language* group (n = 18) was tested using a receptive language battery, the Peabody Picture Vocabulary Test (PPVT), from 30 to 67 months, at both pre- and 6-month post-tests. Of the eighteen participants, fifteen children were Native Hawaiian, making up 83% of the sample, while the remaining 17% reported miscellaneous ethnic backgrounds (e.g., Asian, Samoan, Caucasian). The sample consisted of 56% males and 44% females. 63% were reported to be below 200% of the federal poverty level.

A second group, the *Language Expectations* group (n = 27), included children of different ages: "2-3 years" (12-36 months) (n = 10), "Preschool 3" (37 - 47 months) (n = 11), and "Pre-K 4" (48 - 60 months) (n = 6). Within each age group, children were categorized as "Below," "Meeting," or "Exceeding" language expectations. This included receptive and expressive language assessments for the Fall 2022/2023 and Spring 2022/2023 school year. Individual data (e.g., ethnicity, age, sex) were unattainable for this group.

### **Assessments**

*Ka Pa'alana* employs two language measures to assess children's progress in both receptive and expressive language development: the Peabody Picture Vocabulary Test (Dunn & Dunn, 1981), which measures receptive language skills, and the Teaching Strategies GOLD® Assessment System (Dodge et al., 2002; Lambert et al., 2015), a formative measure of both receptive and expressive language progress for preschool-age children. *Ka Pa'alana* uses these two language measures to ensure a robust assessment of children's language progress within the program.

#### ***Peabody Picture Vocabulary Test***

*Ka Pa'alana's* protocol is to administer the Peabody Picture Vocabulary Test upon a child's enrollment and at six months post-enrollment to monitor the developmental progress of language milestones. The Peabody Picture Vocabulary Test (PPVT) is a standardized assessment tool to evaluate children's receptive vocabulary (Dunn & Dunn, 1981). The results provide norm-referenced scores, including standard scores and percentile ranks, that reflect a child's receptive language ability relative to same-age peers. The primary aim is to estimate the participant's verbal intelligence without requiring reading or writing skills. In this study, the PPVT is administered by a trained *Ka Pa'alana* Assessment Specialist in English, which is the primary language spoken at *Ka Pa'alana*. Children eligible for the assessment must be at least 2.5 years old and have sufficient proficiency in English. *Ka Pa'alana* utilizes the most current version of the test, the PPVT-5.

#### ***The Creative Curriculum®'s Teaching Strategies GOLD® Assessment System—Language Only***

To measure language expectations and other areas of development, *Ka Pa'alana* educators use The Creative Curriculum®'s Teaching Strategies GOLD® assessment system, a formative, classroom-based measure of both expressive and receptive language. Educators observe and document children's language use throughout the school day, using GOLD® objectives and indicators aligned with age-based expectations from current research, professional literature, and state early learning standards (Barry, 2006; Blair & Razza, 2007; Kalmar, 2008; Lambert et al., 2015). GOLD® complements the standardized measure of the PPVT-5 by capturing both structured test performance (PPVT-5) and everyday functional language use in the classroom. Although GOLD® tracks children's developmental growth across multiple domains, this study focuses solely on oral language outcomes due to insufficient observational data in other domains.

### **Curriculum**

#### ***The Creative Curriculum®***

*Ka Pa'alana* utilizes The Creative Curriculum®, a nationally recognized early childhood education curriculum that can be purchased and tailored to meet the specific needs of early childhood education

programs (Dodge et al., 2002). The curriculum provides guidance on child development, classroom organization, teaching strategies, family engagement, and project-based investigations. These projects nurture inquiry skills and support the development of social-emotional, physical, cognitive, literacy, mathematics, and language skills. Activities include teacher-led and group discussions, which particularly enhance oral language skills (Dodge et al., 2002; U.S. Department of Education, 2013).

### **Comprehensive Literacy State Development Grant Professional Development**

*Ka Pa'alana* is supported by the 2019–2024 Comprehensive Literacy State Development grant, which funds its early literacy project for children from birth through age 5. This initiative includes professional development in literacy and language strategies; instructional coaching to implement these strategies in classrooms and to reflect them in lesson plans; parent coaching on how to teach these strategies to families; family engagement; and culture-based learning.

#### ***Professional Development Timeline***

Throughout the 2019-2024 grant period, *Ka Pa'alana* educators received two years of training (2021–2023) from the National Center for Families Learning (NCFL), which specializes in literacy and language training for early childhood educators in family learning centers. Additionally, they received one year of training (2021–2022) from a private Language and Literacy Specialist.

#### ***Training and Implementation***

Training programs included monthly full-day workshops, in-class observations with post-lesson debriefing, and weekly coaching by *Ka Pa'alana's* Curriculum Specialist to support educators in incorporating learned literacy and language strategies into lesson planning and classroom instruction. Each monthly workshop focused on evidence-based oral language and literacy strategies, including dialogic reading, the use of open-ended questions, phonological and phonemic awareness, alphabet, and print knowledge (Lonigan & Shanahan, 2010). Lesson plans were created using The Creative Curriculum®, which *Ka Pa'alana* selected for its emphasis on language and literacy development. In-class observations by *Ka Pa'alana's* Curriculum Specialist and NCFL training specialists provided ongoing support to ensure successful implementation. Professional development also emphasized how educators could teach these strategies to participating families to reinforce literacy skills at home. Families were also provided with professional literacy and language workshops and received free books to read with their children.

### **Comparison Groups**

#### ***Non-Hawaiian Cross-Sectional Minority Group Comparison***

Because this was a retrospective study with a convenience sample of children, no comparison (control) group was available in Hawai'i. To address this limitation, we sought published data on other minority children from similar economic backgrounds and educational settings. One study by Finneran et al. (2020) focused on African American and Hispanic children enrolled in Head Start programs, community-based preschools, and/or kindergarten classrooms. These children were assessed using the PPVT-4 and matched by age, following a similar approach used in the present study. Finneran et al. (2020) investigated the potential influences of cultural and linguistic backgrounds on PPVT-4 performance by analyzing item-level performance in a community sample of preschool-age children from low-SES households drawn from several projects on language and literacy development.

#### ***Non-Hawaiian Longitudinal Language Minority Group Comparison***

Although the Finneran et al. (2020) dataset provided a useful comparison against our sample, a limitation we encountered was its cross-sectional study design, which only measured PPVT results at one point in time, whereas our study measured pre- and post-PPVT results. We sought to find another dataset that was also a longitudinal study measuring pre- and post-PPVT results to examine change in scores over time for a more comparable comparison between samples. Similar to our study, Xu and Liu (2021) evaluated the impact of an intensive early childhood literacy project on children's vocabulary knowledge,

measured through PPVT scores at two time points. The study also sampled minority children (e.g., Hispanic and African-American children) from low socioeconomic backgrounds who attended Head Start programs. Therefore, their dataset offers a more direct and meaningful comparison between populations.

## Measures

### PPVT-5

Mean scores were calculated for “*Raw Score*,” the total number of correct answers calculated by subtracting the number of errors made between the “*Basal*” (starting point) and “*Ceiling*” (highest level) items on the PPVT from the total number of items attempted within that range; “*Standard Score*,” calculated from the raw score based on a child’s chronological age and the standardized normal curve for this assessment; “*Percentile Rank*,” which represents the percentage of scores that fall at or below a given score; “*Normal Curve Equivalent*,” an equal-interval standardization that adjusts for improvements in individuals’ raw scores with age; “*Stanine*,” a method for scaling test scores on a nine-point standard scale; “*Growth Scale Value*,” which assesses individual changes in each child’s vocabulary level over time; “*Test-Age Equivalent*,” which reflects the difference between children’s chronological age and their receptive vocabulary skills, expressed as an age equivalent.

### GOLD® Assessment System – Language Expectations

Mean scores were calculated to describe the average number of students who were “*Below Expectations*,” “*Meets Expectations*,” and “*Exceeds Expectations*,” as assessed by the GOLD® Assessment System. “*Below Expectations*” is defined as children who are not meeting language milestones typical for their age group; “*Meets Expectations*” is defined as children who are meeting language milestones typical for their age group; “*Exceeds Expectations*” is defined as children who are surpassing language milestones typical for their age group.

## Data Analysis Plans

### Data Analysis Plan for Language Expectations Group

For *Language Expectations*, two different time measurements were compared from the beginning (Fall 22/23) to the end of one school year (Spring 22/23). A series of paired sample t-tests was conducted to evaluate differences across *Language Expectations*. All analyses were performed using R Statistical Software (v4.3.1; R CORE TEAM 2023).

### Data Analysis Plan for the Hawaiian Longitudinal Language Group’s PPVT Scores

Two time measurements, represented by pretest and posttest scores in the PPVT, were compared. To evaluate differences across the PPVT-5, a series of paired sample t-tests was conducted. All analyses were performed using R Statistical Software (v4.3.1; R CORE TEAM 2023).

### Data Analysis Plan for Assessing the Hawaiian Longitudinal Language Group’s PPVT Scores to the Non-Hawaiian Cross-Sectional Minority Group

We compared our *Hawaiian Longitudinal Language* group’s PPVT-5 post-raw and standard scores with the PPVT-4 raw and standard scores of Hispanic and African American children from Finneran et al. (2020). According to a Pearson (2018) technical summary report, the PPVT-4 and PPVT-5 are highly correlated ( $r^2 = .71$ ). We used a one-way ANOVA to examine whether there were differences in pretest scores between Hawaiian students and African American and Hispanic students from Finneran et al. (2020). A second one-way ANOVA was conducted to examine whether Hawaiian students’ posttest scores differed from those of African American and Hispanic students.

### Data Analysis Plan for Assessing the Hawaiian Longitudinal Language Group’s PPVT Scores to the Non-Hawaiian Longitudinal Language Minority Group’s PPVT Scores

We compared our *Hawaiian Longitudinal Language* group’s PPVT-5 pretest standard scores to the PPVT-4 pretest standard scores from Xu and Liu (2021). Additionally, we compared our group’s PPVT-5

posttest standard scores to Xu and Liu's (2021) PPVT-4 posttest standard scores. We used a one-way ANOVA to examine whether there were any differences across the two PPVT pretest standard scores. We followed up with a one-way ANOVA to determine whether there were any differences between the two PPVT posttest standard scores. Xu and Liu (2021) reported only PPVT standard scores. Therefore, only standard scores across groups were compared.

## Results

**Table 1**

*Summary of the PPVT-5: Mean Scores, t-scores, and Effect Sizes for the Hawaiian Longitudinal Language Group*

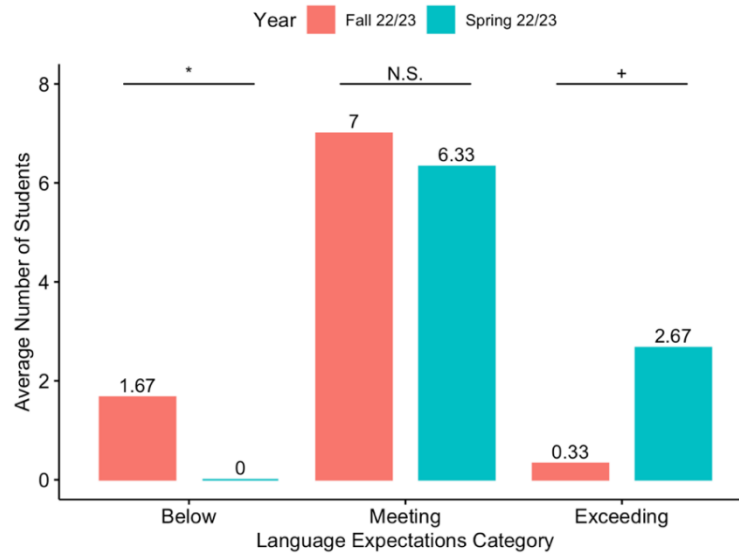
Scores	Pretest			Posttest			<i>t</i>	<i>d</i>
	Mean	SD	Expected	Mean	SD	Expected		
Raw	53.61	26.62	-	83.83	28.35	-	-8.86***	-2.09
Standard	90.67	11.33	100	105.50	18.90	100	-3.97***	-0.94
P.R.	30.72	23.64	50	56.27	28.48	50	-5.15***	-1.21
N.C.E.	36.78	15.85	50	55.72	21.30	50	-4.88***	-1.15
Stanine	3.67	1.50	5	5.56	2.00	5	-5.38***	-1.27
G.S.V.	453.28	12.60	100	467.22	11.78	100	-10.30***	-2.43
C.A.	43.94	10.95	-	49.77	10.92	-	-	-3.04
T.A.E.	38.66	9.45	-	51.50	14.09	-	-6.50***	-1.53

Note: \*  $p < .05$ . \*\*  $p < .01$ . \*\*\* $p < .001$ . Raw = Raw Score; Standard = Standard Score; P.R. = Percentile Rank; N.C.E. = Normal Curve Equivalent; G.S.V. = Growth Scale Value; C.A. = Chronological Age in Months; T.A.E. = Test Age Equivalent. "Expected" refers to test performance within the PPVT's average range of scores. N=18.

### Research Aim 1

Table 1 summarizes data for 18 children who completed the pretest and posttest assessments. At pretest, the children had a mean age of 3.5 years (SD = 10.95 months). Children had a mean raw score of 53.61 at pretest (SD = 26.62), which increased to 83.83 (SD = 28.35) at posttest. Standard scores had a mean of 90.67 at pretest (SD = 11.33), which increased to 105.50 (SD = 18.90) at posttest. One outlier with a score of 160 was identified in the posttest condition. Analyses were conducted both with and without the outlier. Results remained statistically significant in both ( $p < .001$ ). The children's average Percentile Rank (P.R.) was 30.72 at pretest (SD = 23.64), indicating that, on average, the children scored higher than 30.72% of all children who took this assessment. At posttest, the average Percentile Rank increased to 56.27 (SD = 28.48), showing that as a group, the participants scored higher than 56.27% of all children who took the assessment. The children's average Normal Curve Equivalent (N.C.E.) was 36.78 at pretest (SD = 15.85), which increased to 55.72 (SD = 21.30) at posttest. For Stanine, children had a pretest average of 3.67 (SD = 1.50), which increased to 5.56 (SD = 2.00) at posttest. The children's Growth Scale Value (G.S.V.) averaged 453.28 (SD = 12.60) at pretest, which increased to 467.22 (SD = 11.78) at posttest. The Test-Age Equivalent reflects the difference between children's chronological age and their receptive vocabulary skills, expressed as an age equivalent. At pretest, children scored below their chronological age, with a mean age of 38.66 months (SD = 9.45). By posttest, their scores had improved to an average of 51.50 months (SD = 14.09), exceeding their chronological age.

**Figure 1**  
Language Expectations by Year



Note. \*  $p < .05$ ; N.S. = Not statistically significant; +  $p < .10$ . The average number of students classified per language expectation category was calculated across age group categories.

**Research Aim 1**

A repeated-measures t-test was conducted to compare the average number of students below language expectations from the beginning to the end of one year’s attendance at *Ka Pa’alana* Preschool. Figure 1 shows classes for the Fall 22/23 quarter had an average number of students that were below language expectations ( $M = 1.67, SD = 0.58$ ) that exceeded the average number of students that were below language expectations for the Spring 22/23 quarter ( $M = 0, SD = 0$ ), a statistically significant mean increase of 1.67, 95% CI [0.23, 3.10],  $t(2) = 5, p = .04, d = 2.89$ ; a large difference. There was no significant difference in the test comparing the average number of students meeting language expectations,  $p = .53, d = 0.44$ ; a medium effect size. The average number of students exceeding language expectations approached significance,  $p = .07, d = - 2.02$ ; a large effect size.

**Non-Hawaiian Cross-Sectional Minority Group and Hawaiian Longitudinal Language Group**

**Table 2**

Descriptive Summary of Raw and Standard PPVT Scores from the Hawaiian Longitudinal Language Group and the Non-Hawaiian Cross-Sectional Minority Group

Variable	Hawaiian		African American	Hispanic
	Pretest	Posttest		
<b>n</b>	18	18	166	166
<b>Age</b>	43.94 (10.95)	49.77 (10.92)	47.70 (8.0)	48.3 (7.30)
<b>Raw</b>	53.61 (26.62)	83.83 (28.35)	40.70 (19.20)	39.0 (19.0)
<b>% Male</b>	56%	56%	53%	59%
<b>Standard</b>	90.67 (11.33)	105.50 (18.90)	83.20 (11.50)	79.30 (14.30)

Note: African American and Hispanic statistics were obtained from Finneran et al. (2020), who used the PPVT-4, whereas the Hawaiian children in this study used the PPVT-5.

**Research Aim 2**

A series of ANOVAs were conducted to compare the pretest and posttest PPVT-5 raw and standard scores of the *Hawaiian Longitudinal Language* group (“Hawaiian” children, hereafter) to African American and Hispanic students from Finneran et al. (2020). For a complete summary of the descriptive statistics, refer to Table 2. Using a web-based ANOVA calculator for summary data (Interactive Statistical Pages,

2023), we found no statistically significant differences in ages between groups ( $p \geq .05$ ).

Tukey post hoc tests showed that Hawaiian children's PPVT-5 raw scores were greater than those for African American children at pretest,  $p = .022$ , and at posttest,  $p < 0.001$ , and for Hispanic children at pretest,  $p = .008$ , and at posttest,  $p < .001$ .

As shown in Table 2, standard scores differed between groups at pretest,  $F(2, 347) = 8.35$ ,  $p < .001$ , partial  $\eta^2 = .05$ ; a moderately small effect, and posttest,  $F(2, 347) = 31.82$ ,  $p < .001$ , partial  $\eta^2 = .15$ ; a large effect. Tukey post hoc tests showed that Hawaiian children's PPVT-5 standard scores differed from those of African American children at pretest, a marginally significant finding ( $p = .053$ ); however, they were significantly greater at posttest ( $p < .001$ ). Standards scores differed significantly from those of Hispanic children at both the pre-test ( $p = .001$ ) and post-test ( $p < .001$ ).

### *Hawaiian Longitudinal Language Group and Non-Hawaiian Longitudinal Language Minority Group*

**Figure 2**

PPVT Mean Difference Scores by Longitudinal Language Group



### Research Aim 2

A series of ANOVAs was conducted to compare PPVT pretest standard scores between Hawaiian children in the *Hawaiian Longitudinal Language* group and the *Non-Hawaiian Longitudinal Language Minority* group to test for differences across PPVT posttest standard scores. Using a web-based ANOVA calculator for summary data (Interactive Statistical Pages, 2023), we found no statistically significant differences in pretest standard scores between groups ( $p = 0.668$ ). However, standard scores differed significantly between groups at the posttest,  $F(1, 264) = 18.46$ ,  $p < .001$ , partial  $\eta^2 = .07$ ; a moderate effect. Posttest standard scores for Hawaiian children ( $M = 105.50$ ,  $SD = 18.90$ ) were significantly higher than the posttest standard scores for the *Non-Hawaiian Longitudinal Language Minority* group ( $M = 90.75$ ,  $SD = 13.67$ ).

Because the two groups differed at pretest, the average difference between pre- and post-standard scores was calculated for each group. Figure 2 shows Hawaiian children had an average difference score ( $M = 14.83$ ,  $SD = 15.87$ ) that was significantly higher than the average difference score for the *Non-Hawaiian Longitudinal Language Minority* group ( $M = 1.13$ ,  $SD = 13.28$ ),  $F(1, 264) = 17.38$ ,  $p < 0.001$ ; a difference of 13.70, 95% CI [7.23, 20.17]. The difference score was calculated as posttest standard score minus pretest standard score. Positive scores indicate improvement from pretest to posttest.

### Discussion

In both measures of language performance, children showed improvement in language outcomes. Results for the *Language Expectations* group, which measured receptive and expressive language, showed that no children were below language expectations at the end of the school year (see Figure 1). The results

suggest that children who spend one year in *Ka Pa 'alana* tend to improve in language development, moving from “*Below*” language expectations to “*Meeting*” or “*Exceeding*” language expectations.

All PPVT-5 scores, which measured receptive vocabulary, improved. The children also ranked above the normal standard score (100), which is notable considering the participants’ high-risk backgrounds. These results suggest that children who spent six months in *Ka Pa 'alana* Preschool showed improved receptive language development from their initial enrollment.

To further assess the program’s quality and language-instruction standards, we compared our children’s PPVT raw and standard scores with those of African American and Hispanic children enrolled in Head Start programs, community-based preschools, and kindergarten classrooms (Finneran et al., 2020; Xu & Liu, 2021). Head Start is comparable to *Ka Pa 'alana* in that it is a government-funded, two-generation educational program with a community-based preschool that serves low-income communities. All three groups (e.g., African American, Hispanic, and Hawaiian) are considered minority groups within low socioeconomic populations and considered at-risk for academic difficulties due to living in low-SES communities. They are similar in age and use non-mainstream English dialects (Finneran et al., 2020; Xu & Liu, 2021). When compared to the *Non-Hawaiian Cross-Sectional Minority* group (Finneran et al., 2020), we found that Hawaiian children had higher PPVT raw scores than African American and Hispanic children's PPVT scores at both pre- and post-tests. While Hawaiian children showed only a marginal (not statistically significant) difference in PPVT standard scores at pretest compared to African American and Hispanic children, they had higher posttest standard scores.

We found no significant differences between Hawaiian children’s PPVT pretest standard scores and those of the *Non-Hawaiian Longitudinal Language Minority* group (Xu & Liu, 2021). However, the standard scores of both groups were significantly different at posttest; Hawaiian children had higher posttest standard scores. Additionally, Hawaiian children demonstrated substantially greater average improvement in language outcomes over time than the *Non-Hawaiian Longitudinal Language Minority* group. This group served as a significant comparison group. Xiu and Liu (2021) similarly evaluated the impact of an intensive early childhood literacy project on children’s vocabulary knowledge measured by PPVT scores at two time points, who were also from low socioeconomic backgrounds and enrolled in Head Start. Like *Ka Pa 'alana* educators, Head Start educators received professional development in early literacy and language development, classroom design, instructional strategies, assessments, English language learning, and family involvement. Despite demographic (e.g., minority children in low SES communities) and program similarities, children at *Ka Pa 'alana* showed greater improvement in post-test scores.

It is essential to recognize that our comparisons across African American, Hispanic, and Hawaiian populations should not be treated as equivalent, as these groups have unique cultural, social, and environmental factors that may affect outcomes. While they are considered minority groups and may share some experiences (e.g., systemic challenges), their specific contexts differ. These comparison groups are intended to inform discussion; however, direct equivalence should not be assumed.

Nevertheless, our findings indicate that children at *Ka Pa 'alana* show statistically stronger receptive language outcomes than their counterparts in comparable programs. A possible explanation for this difference is the unique features of *Ka Pa 'alana* that support learning, which may lead to positive outcomes and potential advantages for children enrolled in its program. For example, its FCIL program structure requires families to be present in the classroom and be part of their children’s learning. In parent education classes, caregivers learn how to use and implement literacy and language strategies and are given free books to read with their children. Additionally, *Ka Pa 'alana*’s culture-based curriculum contextualizes Hawaiian culture and history within children’s learning, which is rich in oral tradition. Ongoing professional development for educators in literacy and language strategies, which scaffolds children’s existing knowledge, also appears to support greater learning gains for its children. However, further research is needed to confirm these potential contributing factors.

*Ka Pa 'alana*’s focus on language and literacy development is influenced by Hart and Risley’s (1995) study, which found higher vocabulary growth in children from professional families compared to those

from welfare families. The study underscored the influence of socioeconomic factors on language development, emphasizing the crucial role of early language exposure in shaping children's linguistic skills. To bridge this achievement gap, *Ka Pa'alana* received the Comprehensive Literacy State Development (CLSD) grant, which included professional training for its staff to support language and literacy development among children enrolled in the program from low-income communities in Hawai'i.

Low language test performance may be associated with families speaking languages other than mainstream American English, such as Hawai'i's aforementioned and described Pidgin. However, most standardized assessments are designed for mainstream English, and the influence of low socioeconomic status (SES) on PPVT performance is well established (Champion et al., 2003; Finneran et al., 2020; Qi et al., 2006; Terry et al., 2010). Despite the influence of SES on PPVT performance and the prevalence of Pidgin in Hawaiian communities, children in *Ka Pa'alana* showed improved PPVT scores after just six months of enrollment. Although African American and Hawaiian children are dual-dialect learners (Finneran et al., 2020), compared to the PPVT scores of Hispanic and African American children (the *Non-Hawaiian Cross-Sectional Minority* group), Hawaiian children's pre-test scores were already higher.

Finneran et al. (2020) and Xiu & Liu (2021) explored the cultural-linguistic influence on PPVT performance, showing that an English-language standardized assessment like the PPVT may not fully capture meaningful language differences relevant to the child's background or lived experience. Despite the PPVT's shortcomings in capturing the full spectrum of language knowledge among minority children, which can result in lower language scores, dual-dialect Hawaiian children still attained higher PPVT scores compared to minority children in Finneran et al. (2020) and Xiu and Liu (2021). A possible explanation for higher PPVT scores is that *Ka Pa'alana*'s educational structure effectively scaffolds the linguistic background and language knowledge of Hawaiian and local children. However, as this was an exploratory study, further research is needed to determine whether this relationship is correlational or causal.

A possible explanation for these higher initial test scores may be attributed to children in Hawai'i often being raised in multi-generational homes, with at least one family member present throughout the day, which provides more interactive language opportunities (Laforteza, 2022). There is evidence that the impact of poverty varies across sociocultural groups, with significant differences in the quality of the home environment among families living in poverty. Cultural, linguistic, demographic, and psychological factors interact with SES to shape parenting patterns and practices. Mediating factors, such as the caregiving context, can act as protective mechanisms, providing low-SES language-minority children with essential sustenance, stimulation, support, and structure (Bradley et al., 1994; González, 2001). The presence of a committed and effective adult can serve as a scaffold, providing opportunities, protective mechanisms, and emotional support that enable children facing at-risk ecological factors, such as poverty, to develop resilience (González, 2001).

Another possible explanation for the disparity in initial higher PPVT test scores is the aforementioned Hawaiian cultural practice of oral storytelling (*Mo'olelo*) that children are exposed to, colloquially referred to as "Talk Story" (De Silva & Hunter, 2021). Au (1980) demonstrated that reading lessons incorporating "Talk Story" elements facilitated greater engagement and participation among Hawaiian children, which was associated with increased reading achievement. In sum, Hawaiian children may have certain inherent social and cultural advantages that other minoritized children lack. Conversely, other minoritized groups in the US may have additional disadvantages relative to Hawaiians (e.g., more intense and sustained levels of racism and discrimination). Of course, both may be true. Future research should focus on replicating these results and on designing studies that provide answers to these questions. Specifically, do Hispanic and African American preschoolers face unique obstacles relative to Indigenous groups in the U.S.? If not, are there quantifiable social and cultural rearing practices among Indigenous groups that circumvent the challenges associated with poverty and racism?

In environments where adults use complex sentences and diverse vocabulary in daily conversations, children demonstrate enhanced expressive language, perform better on literacy tasks in kindergarten, and achieve significantly higher scores on vocabulary and language tests (Britto & Brooks-Gunn, 2001;

Dickinson & Tabors, 2001; Martini, 2005). Quality teacher-child conversations in the classroom also play a critical role in fostering children's oral language growth (DeBaryshe & Gorecki, 2005; Dickinson et al., 2001). Moreover, quality teaching significantly influences student achievement, with evidence linking improved student outcomes to teachers' professional development in their subject areas (Blank & de las Alas, 2009; Didion et al., 2019; Hattie, 2009, 2012; Yoon et al., 2007).

These findings illustrate how scaffolding, as outlined in Vygotsky's Zone of Proximal Development, applies to language learning—a strategy actively implemented by *Ka Pa'alana* educators. *Ka Pa'alana* educators prioritize interactive and cooperative language learning that builds on children's prior knowledge in areas where their understanding is still developing. Educators were instructed in dialogic reading strategies and open-ended questioning, which engage children in a reciprocal dialogue that places the child at the center of their learning (Wasik & Hindman, 2013; Zevenbergen & Whitehurst, 2003). Dialogic reading strategies and scaffolding opportunities include encouraging children to be active “readers” by asking them to describe what they see in the book's pages, make simple predictions about the story's plot based on what they have observed, infer the characters' emotional states based on facial illustrations, and so forth (Zevenbergen & Whitehurst, 2003). It also scaffolds children's learning by introducing “higher-learning” words—for example, extending a familiar word like “big” to synonyms such as “giant” or “enormous”, increasing vocabulary knowledge. Open-ended questions operate in a similar fashion (Wasik & Hindman, 2013). *Ka Pa'alana* educators use inquiry-based, culturally relevant learning activities to prompt rich oral language dialogue by asking, “How did we make *poi* in class today?” “What did we see at the taro farm during our field trip?” “How do you dance *hula*?” These strategies scaffold learning while promoting vocabulary development, comprehension, and expressive language in a culturally sensitive context.

*Ka Pa'alana* staff participate in professional training on evidence-based language and literacy practices. The training focused on learning how to foster dialogue through open-ended questions, introducing new vocabulary through thematic studies and aloud, and incorporating descriptive language into everyday interactions (Lonigan & Shanahan, 2010; Wasik & Hindman, 2013; Whitehurst et al., 1994). Our findings demonstrate that concentrated professional development in language and literacy strategies for program educators, which scaffolds Hawaiian and local children's existing language knowledge shaped by their culture, is associated with improved language outcomes in our sample of children.

### Limitations and Future Directions

This study faced several limitations. First, the transient nature of the population *Ka Pa'alana* serves (e.g., families experiencing homelessness) posed challenges for longitudinal data collection, leading to lower retention rates and smaller sample sizes, which are typical for these types of studies (Booth et al., 1999). Despite these challenges, reporting data on Native Hawaiians remains essential due to their underrepresentation in the literature.

Second, the limitation encountered for Hawaiian children was the comparison against other students. We did not have data from a control preschool group (e.g., children in Head Start programs in Hawai'i). We struggled to find comparable datasets. While Finneran et al. (2020) provided a comparable group, their study only included single PPVT test scores, unlike our pre- and posttest design. Xu and Liu (2021) presented a comparable group with pre- and posttest scores, but provided only standard scores and summary statistics. This required us to run separate analyses for pretest and posttest scores rather than a two-way repeated-measures ANOVA due to the absence of raw data. Future collaborations with local and national Head Start programs could address these limitations by enabling more robust comparisons and assessing the impact of Indigenous culture-based programs, like *Ka Pa'alana*, on language outcomes, among other predictors of academic success.

Third, because we lacked a control preschool group, we made comparisons across studies and populations, which may have confounding variables when comparing their participants with ours. For example, these studies have different sampling methods, vary in sample size and settings, and are

conducted in different contexts. These differences could affect the internal validity of our comparisons. Therefore, any differences could be attributed to research settings and protocols, rather than true differences between populations.

Fourth, we used the PPVT-5, whereas Finneran et al. (2020) and Xu and Liu (2021) used the PPVT-4. While this is not ideal, the assessments are highly correlated ( $r^2 = .71$ ) and share a comparable format, with the PPVT-5 incorporating upgrades to digital applications (Dunn, 2019).

Finally, due to limited sample sizes, categories were averaged across age groups for the *Language Expectations* group. Without individual participant data, we could not track progress as we did for the children in the *Hawaiian Longitudinal Language* group. Future research should aim to collect individual-level data and explore whether language expectation effects persist across different age groups.

## Conclusion

We assessed how professional development for educators at *Ka Pa'alana* Homeless Family Education Program, a Family-Child Interaction Learning program, was related to the language development of Hawaiian and other minority children. Through professional development provided by the Comprehensive Literacy State Development grant, educators learned and implemented evidence-based oral language and literacy strategies in the classroom. In both measures of language performance (PPVT-5 and *Language Expectations*), children showed marked improvement in receptive and expressive language outcomes. When compared to similar programs that also serve low-SES minority populations (Finneran et al., 2020; Xu & Liu, 2021), children at *Ka Pa'alana* had higher receptive language scores, as measured by the PPVT-5, suggesting potential positive outcomes and advantages of *Ka Pa'alana* Homeless Family Education Program. To our knowledge, this is the first study to discuss Family-Child Interaction Learning programs (FCIL) in the early childhood education literature.

Family is central to Hawaiian culture. Respect for parents and elders and the cherishing of children make families more receptive to efforts that promote family involvement in preschool education (DeBaryshe & Gorecki, 2005). Hawaiians are marginalized in their own land and suffer from historical trauma and generational poverty, resulting in higher rates of crime, mortality rates, and poor educational outcomes (Kana'iaupuni & Else, 2005; Kana'iaupuni et al., 2010). Family Child-Interaction Learning programs, which incorporate culture-based education like *Ka Pa'alana*, are dedicated to strengthening and supporting Hawaiian families and at-risk communities by providing high-quality child and parent education that celebrates Hawaiian cultural identity.

## Declarations

### *Authors' Declarations*

**Acknowledgements:** We are grateful to *Ka Pa'alana* for their support and participation in our research, as well as to the families and children enrolled in the program. We are also thankful to Jason Rodin for his help with statistical analysis.

**Authors' contributions:** PG and FS conceived and designed the study. PG collected the data, performed the data analysis, and wrote the manuscript. FS served as an academic advisor, providing feedback and guidance to improve the manuscript's content and quality.

**Competing interests:** The authors declare that they have no competing interests.

**Funding:** This study was not funded.

**Ethics approval and consent to participate:** This study was reviewed by The George Washington University's Institutional Review Board (IRB), which determined that it did not meet the definition of human subject research. It was therefore exempt from IRB review and did not require informed consent. *Ka Pa'alana* originally collected the data analyzed in this study as part of its routine program evaluation and reporting to its funders, which does not require informed consent. The data provided to the research team by *Ka Pa'alana* were fully de-identified, with personally identifiable information removed to ensure anonymity and confidentiality.

### *Publisher's Declarations*

**Editorial Acknowledgement:** The editorial process of this article was completed under the editorship of Dr. Mine Gol-Guven through a double-blind peer review with external reviewers.

**Publisher's Note:** Journal of Childhood, Education & Society remains neutral with regard to jurisdictional claims in published maps

and institutional affiliation.

## References

- Anderson, S. A. (2000). How parental involvement makes a difference in reading achievement. *Reading Improvement*, 37(2), 61-86.
- Armstrong, H. (2023). *Review of strategic plan desired outcome*. Hawai'i State Department of Education. [https://boe.hawaii.gov/Meetings/Notices/Meeting%20Material%20Library/SAC\\_12072023\\_Review%20of%20Strategic%20Plan%20Desired%20Outcome%201.1.1.pdf](https://boe.hawaii.gov/Meetings/Notices/Meeting%20Material%20Library/SAC_12072023_Review%20of%20Strategic%20Plan%20Desired%20Outcome%201.1.1.pdf)
- Au, K. H. P. (1980). Participation structures in a reading lesson with Hawaiian children: Analysis of a culturally appropriate instructional event. 1. *Anthropology & education quarterly*, 11(2), 91-115. <https://doi.org/10.1525/aeq.1980.11.2.05x1874b>
- Barry, E. S. (2006). Children's memory: A primer for understanding behavior. *Early Childhood Education Journal*, 33, 405-411. <https://doi.org/10.1007/s10643-006-0073-3>
- Benzies, K., Mychasiuk, R., Kurilova, J., Tough, S., Edwards, N., & Donnelly, C. (2014). Two-generation preschool programme: Immediate and 7-year-old outcomes for low-income children and their parents. *Child & Family Social Work*, 19(2), 203-214. <https://doi.org/10.1111/j.1365-2206.2012.00894.x>
- Blair, C., & Razza, R. P. (2007). Relating effortful control, executive function, and false belief understanding to emerging math and literacy ability in kindergarten. *Child Development*, 78(2), 647-663. <https://doi.org/10.1111/j.1467-8624.2007.01019.x>
- Blake, B., & Pope, T. (2008). Developmental psychology: Incorporating Piaget's and Vygotsky's theories in classrooms. *Journal of Cross-Disciplinary Perspectives in Education*, 1(1), 59-67.
- Blank, R. K., & de las Alas, N. (2009). *The effects of teacher professional development on gains in student achievement: How meta-analysis provides scientific evidence useful to education leaders*. Council of Chief State School Officers.
- Booth, S. (1999). Researching health and homelessness: Methodological challenges for researchers working with a vulnerable, hard-to-reach, transient population. *Australian Journal of Primary Health*, 5(3), 76-81. <https://doi.org/10.1071/PY99037>
- Bradley, R. H., Whiteside, L. Y., & Mundfrom, D. J. (1994). Early indications of resilience and their relation to experiences in the home environments of low birth-weight, premature children living in poverty. *Child Development*, 65(2), 346-360. <https://doi.org/10.2307/1131388>
- Britto, P. R., & Brooks-Gunn, J. (2001). Beyond shared book reading: Dimensions of home literacy and low-income African American preschoolers' skills. *New Directions for Child and Adolescent Development*, 92, 73-89. <https://doi.org/10.1002/cd.16>
- Campbell, M. E., Haveman, R., Wildhagen, T., & Wolfe, B. L. (2008). Income inequality and racial gaps in test scores. In K. Magnuson & J. Waldfogel (Eds.), *Steady gains and stalled progress: Inequality and the Black-White test score gap* (pp. 110-136). Russell Sage Foundation.
- Champion, T. B., Hyter, Y. D., McCabe, A., & Bland-Stewart, L. M. (2003). "A matter of vocabulary": Performances of low-income African American Head Start children on the Peabody Picture Vocabulary Test-III. *Communication Disorders Quarterly*, 24(3), 121-127. <https://doi.org/10.1177/15257401030240030301>
- Chase-Lansdale, P. L., & Brooks-Gunn, J. (2014). Two-generation programs in the twenty-first century. *The Future of Children*, 24(1), 13-39. <https://doi.org/10.1353/foc.2014.0003>
- Christman, D. E., Guillory, R. M., Fairbanks, A. R., & González, M. L. (2008). A model of American Indian school administrators: Completing the circle of knowledge in Native schools. *Journal of American Indian Education*, 47(3), 53-72.
- Collins, S. (2010). *Multiyear student/teacher relationships and language development in children of Hawaiian descent at Kamehameha Schools community-based early childhood education program* (Doctoral dissertation, Walden University). ProQuest Dissertations & Theses Global.
- Da Pidgin Coup. (1999). Pidgin and education: A position paper. *Educational Perspectives*, 41(1-2), 30-39. <https://coe.hawaii.edu/wp-content/uploads/2020/04/Vol41-1-2.pdf>
- Daniels, H. (2001). *Vygotsky and pedagogy*. Routledge. <https://doi.org/10.4324/9780203469576>
- De Silva, R. M., & Hunter, J. E. (2021). Puhi in the tree and other stories: Unlocking the metaphor in native and Indigenous Hawaiian storytelling. *The Qualitative Report*, 26(6), 1932-1961. <https://doi.org/10.46743/2160-3715/2021.4109>
- DeBaryshe, B. D., & Gorecki, D. M. (2005). Learning connections: A home-school partnership to enhance emergent literacy and emergent math skills in at-risk preschoolers. In I. Else & S. Rowe (Eds.), *Learning in cultural context: Family, peers, and school* (pp. 175-198). Springer. [https://doi.org/10.1007/0-387-27550-9\\_8](https://doi.org/10.1007/0-387-27550-9_8)
- DeBaryshe, B. D., Stern, I., Bird, O., & Zysman, D. (2017). *Family-child interaction programs in Hawai'i*. University of Hawai'i Center on the Family. <https://uhfamily.hawaii.edu/sites/uhfamily.hawaii.edu/files/publications/Family-ChildInteraction.pdf>
- Demmert, W. G. (2011). What is culture-based education? Understanding pedagogy and curriculum. In A. A. Editor & B. B. Editor (Eds.), *Honoring our heritage: Culturally appropriate approaches to Indigenous education* (pp. 1-9). Northern Arizona University.

- Dickinson, D. K., Sprague, K. E., Neuman, S. B., & Dickinson, D. K. (2001). The nature and impact of early childhood care environments on the language and early literacy development of children from low-income families. In S. B. Neuman & D. K. Dickinson (Eds.), *Handbook of early literacy research* (pp. 263-280). Guilford Press.
- Didion, L., Toste, J. R., & Filderman, M. J. (2019). Teaching professional development and student reading achievement: A meta-analytic review of the effects. *Journal of Research and Educational Effectiveness*, 13(1), 29-66. <https://doi.org/10.1080/19345747.2019.1670884>
- Dodge, D. T., Colker, L. J., & Heroman, C. (2002). *The creative curriculum for preschool* (4th ed.). Teaching Strategies.
- Dunn, D. M., & Dunn, L. M. (2019). *Peabody Picture Vocabulary Test* (5th ed.) [Measurement instrument]. Pearson
- Dunn, L. M., & Dunn, L. M. (1981). *Peabody Picture Vocabulary Test-Revised*. American Guidance Service.
- Eades, D., Jacobs, S., Hargrove, E., & Menacker, T. (2006). Pidgin, local identity, and schooling in Hawai'i. In S. J. Nero (Ed.), *Dialects, Englishes, creoles and education* (pp. 139-163). Lawrence Erlbaum Associates.
- Finneran, D. A., Heilmann, J. J., Moyle, M. J., & Chen, S. (2020). An examination of cultural-linguistic influences on PPVT-4 performance in African American and Hispanic preschoolers from low-income communities. *Clinical Linguistics & Phonetics*, 34(3), 242-255. <https://doi.org/10.1080/02699206.2019.1628811>
- González, V. (2001). The role of socioeconomic and sociocultural factors in language-minority children's development: An ecological research view. *Bilingual Research Journal*, 25(1-2), 1-30. <https://doi.org/10.1080/15235882.2001.10162782>
- Grace, D. J., & Ku'ulei Serna, A. (2013). Early childhood education and care for Native Hawaiian children in Hawai'i: A brief history. *Early Child Development and Care*, 183(2), 308-320. <https://doi.org/10.1080/03004430.2012.673487>
- Guiberson, M., & Vining, C. B. (2023). Culturally responsive and Indigenous language strategies: Findings from a scoping review. *Communication Disorders Quarterly*, 45(1), 3-19. <https://doi.org/10.1177/15257401231155812>
- Hart, B., & Risley, T. R. (1995). *Meaningful differences in the everyday experience of young American children*. Paul H. Brookes Publishing Co.
- Hattie, J. (2012). *Visible learning for teachers: Maximizing impact on learning*. Routledge. <https://doi.org/10.4324/9780203181522>
- Hattie, J. A. (2009). *Visible learning: A synthesis of 800+ meta-analyses on achievement*. Routledge.
- Hawai'i Children's Action Network. (2022). *Kids count 2022 Hawai'i profile*. <https://www.hawaii-can.org/kids-count-2022-hawaii-profile>
- Hawai'i State Department of Education. (2024, November 21). *Update on strategic plan desired outcome 1.1.1: All entering kindergarten students are assessed for social, emotional, and academic readiness and provided necessary and timely support to develop foundational skills for learning* [Report]. [https://boe.hawaii.gov/wp-content/uploads/2024/11/2024-11-21\\_SAC\\_kindergarten-entry-assessment.pdf](https://boe.hawaii.gov/wp-content/uploads/2024/11/2024-11-21_SAC_kindergarten-entry-assessment.pdf)
- Henderson, A. T., & Mapp, K. L. (2002). *A new wave of evidence: The impact of family, school, and community connections on student achievement*. Southwest Educational Development Laboratory.
- Interactive Statistical Pages. (2023). *ANOVA calculator for summary data*. <https://statpages.info/>
- Jacobs, K., Cramer, J., Noles, T., & Lovett, P. (2019). *Defining our work: Families learning together*. National Center for Families Learning. <https://familieslearning.org/wp-content/uploads/2023/12/NCFL-Defining-Our-Work-F3.pdf>
- Kaiwi, M. A. K., & Kahumoku III, W. (2006). Makawalu: Standards, curriculum, and assessment for literature through an Indigenous perspective. *Hūlili: Multidisciplinary Research on Hawaiian Wellbeing*, 3(1), 182-206.
- Kalmar, K. (2008). Let's give children something to talk about! Oral language and preschool literacy. *Young Children*, 63(1), 88-92
- Kana'iaupuni, S. M. (2004). Identity and diversity in contemporary Hawaiian families: Ho 'i hou i ka iwi kuamo 'o. *Hūlili: Multidisciplinary Research on Hawaiian Well-being*, 1(1), 53-71.
- Kana'iaupuni, S. M. (2007). *A brief overview of culture-based education and annotated bibliography* (Culture-Based Education Brief Series). Kamehameha Schools, Research & Evaluation.
- Kana'iaupuni, S. M., & Ishibashi, K. (2003). *Left behind?: The status of Hawaiian students in Hawai'i public schools* (Policy Analysis & System Evaluation Rep. No. 02-03). Kamehameha Schools.
- Kana'iaupuni, S., & Else, I. (2005). Ola ka inoa (The name lives). In I. Else & S. Rowe (Eds.), *Learning in cultural context* (pp. 109-131). Springer. [https://doi.org/10.1007/0-387-27550-9\\_5](https://doi.org/10.1007/0-387-27550-9_5)
- Kana'iaupuni, S., Ledward, B., & Jensen, U. (2010). *Culture-based education and its relationship to student outcomes*. Kamehameha Schools Research and Evaluation. <https://nirnresourcehub.org/wp-content/uploads/2021/01/Culture-Based-Education-Programs-and-Relationship-to-Student-Outcomes.pdf>
- Kaomea, J. (2005). Reflections of an 'always already' failing Native Hawaiian mother: Deconstructing colonial discourses on

- Indigenous child-rearing and early childhood education. *Hūlili: Multidisciplinary Research on Hawaiian Well-Being*, 2(1), 77-95.
- Kitson, R., & Bowes, J. (2010). Incorporating Indigenous ways of knowing in early education for Indigenous children. *Australasian Journal of Early Childhood*, 35(4), 81-89. <https://doi.org/10.1177/183693911003500410>
- Ladd, H. F. (2012). Education and poverty: Confronting the evidence. *Journal of Policy Analysis and Management*, 31(2), 203-227. <https://doi.org/10.1002/pam.21615>
- Laforteza, R. C. (2022). *Co-housing: A housing approach to fostering a multigenerational community* (Doctoral dissertation, University of Hawai'i at Mānoa). ProQuest Dissertations & Theses Global.
- Lambert, R. G., Kim, D. H., & Burts, D. C. (2015). The measurement properties of the Teaching Strategies GOLD® assessment system. *Early Childhood Research Quarterly*, 33, 49-63. <https://doi.org/10.1016/j.ecresq.2015.05.004>
- Lilomaiva-Doktor, S. I. (2020). Oral traditions, cultural significance of storytelling, and Samoan understandings of place or fauna. *Native American and Indigenous Studies*, 7(1), 121-151. <https://doi.org/10.1353/nai.2020.a761810>
- Loeb, S., & Bassok, D. (2012). Early childhood and the achievement gap. In H. F. Ladd & M. E. Goertz (Eds.), *Handbook of research in education finance and policy* (pp. 539-556). Routledge. <https://doi.org/10.4324/9780203961063-40>
- Lonigan, C. J., & Shanahan, T. (2010). Developing early literacy skills: Things we know we know and things we know we don't know. *Educational Researcher*, 39(4), 340-346. <https://doi.org/10.3102/0013189X10369832>
- Martini, M. (2005). Features of teaching associated with significant gains in language test scores by Hawaiian preschool children. In I. Else & S. Rowe (Eds.), *Learning in cultural context: Family, peers, and school* (pp. 153-173). Springer. [https://doi.org/10.1007/0-387-27550-9\\_7](https://doi.org/10.1007/0-387-27550-9_7)
- Morgan, P. L., Farkas, G., Hillemeier, M. M., Hammer, C. S., & Maczuga, S. (2015). 24-month-old children with larger oral vocabularies display greater academic and behavioral functioning at kindergarten entry. *Child Development*, 86(5), 1351-1370. <https://doi.org/10.1111/cdev.12398>
- Nord, C. W., Lennon, J., Liu, B., & Chandler, K. (2000). *Home literacy activities and signs of children's emerging literacy, 1993 and 1999*. National Center for Education Statistics.
- Okhiro, M., Sehgal, V., Wilkinson, T., Voloch, K. A., Enos, R., & O'Brien, J. (2014). Addressing health disparities by building organizational capacity in the community: A case study of the Wai'anae Coast Comprehensive Health Center. *Hawai'i Journal of Medicine & Public Health*, 73(12 Suppl 3), 34-39.
- Panhwar, A. H., Ansari, S., & Ansari, K. (2016). Sociocultural theory and its role in the development of language pedagogy. *Advances in Language and Literary Studies*, 7(6), 183-188. <https://doi.org/10.7575/aiac.all.v.7n.6p.183>
- Pearson. (2018). *PPVT-5 and EVT-3 technical summary*. Pearson. <https://www.pearsonassessments.com/content/dam/school/global/clinical/us/assets/ppvt-5/ppvt-5-and-evt-3-technical-summary.pdf?srsId=AfmBOooTgpPf-taZqyt5MtnkaniK0ezSBkysf9wZ8dcK8BHpNfr4tAe>
- Polly, D., Allman, B., Casto, A., & Norwood, J. (2017). Sociocultural perspectives of learning. In R. E. West, R. A. Reiser, W. Dick, & T. Galyean (Eds.), *Foundations of learning and instructional design technology* (pp. 73-84). EdTech Books.
- Qi, C. H., Kaiser, A. P., Milan, S., & Hancock, T. (2006). Language performance of low-income African American and European American preschool children on the PPVT-III. *Language, Speech, and Hearing Services in Schools*, 37, 5-16. [https://doi.org/10.1044/0161-1461\(2006/002\)](https://doi.org/10.1044/0161-1461(2006/002))
- Schmit, S., Matthews, H., & Golden, O. (2014). *Thriving children, successful parents: A two-generation approach to policy*. Center for Law and Social Policy. <https://files.eric.ed.gov/fulltext/ED561729.pdf>
- Schonleber, N. S. (2011). *Hawaiian culture-based education and the Montessori approach: Overlapping teaching practices, values, and worldview*. *Journal of American Indian Education*, 50(3), 5-25. <https://doi.org/10.1353/jaie.2011.a798449>
- Scott-Jones, D. (1995). Parent-child interactions and school achievement. In B. A. Ryan, G. R. Adams, T. P. Gullotta, R. P. Weissberg, & R. L. Hampton (Eds.), *The family-school connection: Theory, research, and practice* (pp. 93-108). Sage.
- Singh, M., Amor, H. B. H., & Zhang, S. (2014). *Native Hawaiian students' achievement gap in reading: A longitudinal study from Hawai'i*. Education Northwest. <https://educationnorthwest.org/sites/default/files/pdf/native-hawaiian-students-achievement-gap.pdf>
- Smith, S. E. (1995). *Two-generation programs for families in poverty: A new intervention strategy*. Ablex Publishing.
- St. Pierre, R. G., Layzer, J. I., & Barnes, H. V. (1995). Two-generation programs: Design, cost, and short-term effectiveness. *The Future of Children*, 5(2), 76-93. <https://doi.org/10.2307/1602368>
- Sumida, J., & Gillespie, M. C. (1985). Language development in the Hawaii Follow-Through Project. *Journal of Reading, Writing, and Learning Disabilities International*, 1(4), 71-79. <https://doi.org/10.1080/0748763850010408>
- Temkin, D. (2006). *Family involvement in early childhood education*. Harvard Family Research Project. <https://knilt.arcc.albany.edu/images/f/fc/Earlychildhood.pdf>

- Terry, N. P., Connor, C. M., Thomas-Tate, S., & Love, M. (2010). Examining relationships among dialect variation, literacy skills, and school context in first grade. *Journal of Speech, Language, and Hearing Research*, 53, 126-145. [https://doi.org/10.1044/1092-4388\(2009/08-0058\)](https://doi.org/10.1044/1092-4388(2009/08-0058))
- U.S. Department of Education, Institute of Education Sciences, What Works Clearinghouse. (2013, March). *Early childhood education intervention report: The Creative Curriculum® for preschool, fourth edition*.
- U.S. Department of Health and Human Services, Administration for Children and Families. (2010). *Head Start Impact Study: Final report*. [https://acf.gov/sites/default/files/documents/opre/hs\\_impact\\_study\\_final.pdf](https://acf.gov/sites/default/files/documents/opre/hs_impact_study_final.pdf)
- Urban Institute. (2024). *How do two-generation approaches affect whole families?* [https://www.urban.org/sites/default/files/2024-07/Executive\\_Summary\\_How\\_Do\\_Two-Generation\\_Approaches\\_Affect\\_Whole\\_Families.pdf](https://www.urban.org/sites/default/files/2024-07/Executive_Summary_How_Do_Two-Generation_Approaches_Affect_Whole_Families.pdf)
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes* (M. Cole, V. John-Steiner, S. Scribner, & E. Souberman, Eds. & Trans.). Harvard University Press.
- Vygotsky, L. S. (1986). *Thought and language* (A. Kozulin, Ed. & Trans.). MIT Press.
- Wasik, B. A., & Hindman, A. H. (2013). Realizing the promise of open-ended questions. *The Reading Teacher*, 67(4), 302-311. <https://doi.org/10.1002/trtr.1218>
- Weiss, H. (2014). *Evidence of the effectiveness of complementary learning*. Harvard Family Research Project. [https://evidence2impact.psu.edu/wp-content/uploads/2023/05/s\\_wifis20c03.pdf](https://evidence2impact.psu.edu/wp-content/uploads/2023/05/s_wifis20c03.pdf)
- Whitehurst, G. J., Arnold, D. S., Epstein, J. N., Angell, A. L., Smith, M., & Fischel, J. E. (1994). A picture book reading intervention in day care and home for children from low-income families. *Developmental Psychology*, 30(5), 679-689. <https://doi.org/10.1037/0012-1649.30.5.679>
- Wilson, W. H., & Kamanā, K. (2006). For the interest of the Hawaiians themselves: Reclaiming the benefits of Hawaiian-medium education. *Hūlili: Multidisciplinary Research on Hawaiian Well-Being*, 3(1), 153-181.
- Wood, C., Diehm, E. A., & Callender, M. F. (2016). An investigation of language environment analysis measures for Spanish-English bilingual preschoolers from migrant low-socioeconomic-status backgrounds. *Language, Speech, and Hearing Services in Schools*, 47(2), 123-134. [https://doi.org/10.1044/2015\\_LSHSS-14-0115](https://doi.org/10.1044/2015_LSHSS-14-0115)
- Xu, Y., & Liu, L. (2021). Examining sociocultural factors in assessing vocabulary knowledge of children from low socioeconomic backgrounds. *Early Child Development and Care*, 191(15), 2396-2406. <https://doi.org/10.1080/03004430.2019.1711375>
- Yamauchi, L. A., Chapman de Sousa, E. B., Ka'anehe, R. I., & Jensen, B. (2024). Instructional conversations for equitable participation to challenge deficit views of Pidgin in Hawai'i. *Journal of Language, Identity & Education*, 1-16. <https://doi.org/10.1080/15348458.2024.2366382>
- Yamauchi, L. A., Lau-Smith, J. A., & Luning, R. J. (2008). Family involvement in a Hawaiian language immersion program. *School Community Journal*, 18(1), 39-60.
- Yoon, K. S., Duncan, T., Lee, S. W. Y., Scarloss, B., & Shapley, K. L. (2007). *Reviewing the evidence on how teacher professional development affects student achievement* (Issues & Answers Report, REL 2007-No. 033). Regional Educational Laboratory Southwest.
- Zevenbergen, A. A., & Whitehurst, G. J. (2003). Dialogic reading: A shared picture book reading intervention for preschoolers. In A. van Kleeck, S. A. Stahl, & E. B. Bauer (Eds.), *On reading books to children: Parents and teachers* (pp. 177-200). Lawrence Erlbaum Associates.

# Imagining futures: Possible selves and professional identity in an early childhood pre-practicum incident

Ignacio Figueroa-Céspedes<sup>1</sup>, Esteban Fica-Pinol<sup>2</sup>

**Abstract:** This study examines how three Chilean preservice early-childhood teachers configured their Professional Teacher Identity during a shared pre-practicum critical incident. Using a narrative-oriented qualitative design, we analysed two rounds of interviews, reflective writing on possible selves, and a co-construction meeting. A WhatsApp disclosure by a peer—who was both a preservice teacher and a parent— was followed by leadership action and culminated in the removal of two participants from their placement. Reflexive thematic analysis showed three recurring tensions: (1) *emotional labour*, as candidates balanced authenticity with expectations of professional self-regulation; (2) *micropolitical agency*, as vertical authority structures limited opportunities for dialogic participation; and (3) *personal-professional boundary work*, as parent, student, and future-teacher identities collided. Conceptually, the study demonstrates how possible selves and self-discrepancies shaped interpretations of the incident and the perceived attainability of desired professional futures. The findings point to practical implications for initial teacher education, including structured critical-incident learning, preparation for digital family-school communication, and reflective supervision that integrates work with possible selves.

## Article History

Received: 19 September 2025

Accepted: 03 January 2026

## Keywords

Professional teacher identity;  
Early childhood education;  
Critical incidents; Narratives;  
Possible selves

## Introduction

Professional Teacher Identity (PTI) is a central dimension of Early Childhood Education and Care (ECEC), as it underpins teachers' capacity to exercise ethical judgement, respond sensitively to young children's needs, and navigate the relational demands of their work (Flores & González, 2024; Olsen, 2024; Pardo & Opazo, 2019; Su, 2024). PTI becomes the lens through which early childhood educators make sense of who they are—and who they seek to become—in contexts shaped by accountability, care, and structural inequality (Delaney, 2018; Fairchild & Mikuska, 2021; Kamenarac, 2022; Robson & Martin, 2019). From this perspective, identity is not merely an individual attribute but a socially and politically situated project, continuously negotiated at the intersection of pedagogical norms, labour conditions, and broader struggles for the professional recognition of care work.

Practicum and pre-practicum placements are pivotal arenas for identity negotiation, as they confront preservice teachers with authentic dilemmas that require aligning personal narratives, institutional norms, and professional responsibilities (Ma & Hedges, 2024; Weatherby-Fell et al., 2019). Yet reviews of early childhood practicums suggest that pre-practicum phases remain weakly conceptualised, often framed as technical preparation rather than as ecologies where recognition, vulnerability, and the legitimacy of voice are first negotiated (Matengu et al., 2020), echoing broader calls to better connect teacher identity research with situated practices and institutional contexts (Rushton et al., 2023). This gap is especially marked in Latin America—and in Chile in particular—where schoolification, struggles for recognition, and standardisation pressures continue to redefine what counts as professional practice in ECEC, while empirical scholarship on PTI is only beginning to gain traction (Figueroa-Céspedes & Guerra, 2023a; Flores & González, 2024; Guevara, 2020; Lagos-Serrano, 2022; Oliveira & Viviani, 2019; Pardo & Opazo, 2019).

At the same time, practicum settings are increasingly hybrid and digitally mediated. Parents'

<sup>1</sup> Diego Portales University, Faculty of Education, Santiago, Chile, e-mail: [ignacio.figueroa@mail.udp.cl](mailto:ignacio.figueroa@mail.udp.cl), ORCID: <https://orcid.org/0000-0002-2756-1831>

<sup>2</sup> Metropolitan University of Educational Sciences, Doctorate Program, Santiago, Chile, e-mail: [esteban.fica2025@umce.cl](mailto:esteban.fica2025@umce.cl), ORCID: <https://orcid.org/0000-0002-7142-0825>

WhatsApp groups exemplify this hybridity: while they can facilitate coordination and community-building, they have also been documented as intensifying visibility, accelerating conflict, and introducing dilemmas around disclosure, confidentiality, and institutional loyalty (Davidson & Turin, 2021; Moyano et al., 2023). In the Chilean context, parent–school WhatsApp messaging has been described as a widespread channel for coordination, surveillance, and conflict (Moyano et al., 2023), alongside accounts of early childhood educators occupying intermediary positions within hierarchical and affective structures (Lagos-Serrano, 2022). Together, these dynamics constitute part of the institutional landscape in which preservice teachers’ practicum experiences unfold.

Against this backdrop, examining identity work at the pre-practicum stage becomes essential. Critical incidents—unexpected events that disrupt routine expectations and demand interpretive and ethical response (Figueroa-Céspedes, 2024; Monereo, 2023)—provide a particularly incisive lens for tracing how preservice teachers configure an emerging PTI prior to full practicum. This article analyses a shared critical incident in a Chilean pre-practicum involving three preservice early childhood teachers, focusing on how possible selves are configured and how they interact with current self-understandings (Higgins et al., 1994; Markus & Nurius, 1986) as participants imagine, evaluate, and recalibrate their professional futures under conditions of institutional decision-making and digital visibility (Akkerman & Meijer, 2011; Irvine et al., 2024). By bringing possible selves into dialogue with micropolitical literacy and boundary work in a WhatsApp-mediated escalation, the study addresses how early practicum placements mediate identity (re)calibration through shifting risks, contested recognition, and constrained voice—foregrounding the placement-quality conditions under which such recalibration becomes educative rather than silencing. We ask:

(1) How do preservice teachers’ current and possible selves interact in constructing PTI during a shared critical incident in pre-practicum?

(2) What tensions between actual, ideal, ought, and feared selves emerge in relation to pedagogical and micropolitical challenges during teacher preparation?

Conceptually, we mobilise a sociocultural–dialogical view of PTI as a dynamic, relational configuration of meanings about one’s current and aspired teacher self, negotiated over time across practices, relationships, and institutional expectations (Akkerman & Meijer, 2011; Beijaard et al., 2004; Kelchtermans, 2009).

## Literature Review

Research consistently shows that a robust PTI supports quality, equity, and children’s well-being by integrating professional judgement, ethical commitment, and contextual responsiveness (Flores & González, 2024; Vanegas & Fuentealba, 2019). In ECEC, PTI develops through reflective and collaborative capacities that enable educators to navigate accountability while sustaining relationships with colleagues, families, and communities (Flores et al., 2022; González & Torres, 2022; Weatherby-Fell et al., 2019). However, across accountability-oriented systems, professionalisation processes often privilege performance, measurability, and standardisation, marginalising relational and care-centred dimensions of practice and reshaping how professional recognition and teacher identity are constructed (Delaney, 2018; Irvine et al., 2024; Kamenarac, 2022; Kelchtermans, 2005; Robson & Martin, 2019).

These dynamics are particularly salient in feminised professions, where care and emotional labour—the regulation and display of emotions in response to institutional and relational expectations (Hochschild, 2012)—are frequently framed as natural or taken-for-granted dispositions rather than recognised as skilled pedagogical expertise (Fairchild & Mikuska, 2021; Kamenarac, 2022). Situated research shows how this devaluation is enacted and negotiated in practice: studies on professionalisation and accountability document the vulnerability of relational work to devaluation (Falabella et al., 2024), while qualitative research—particularly narrative and biographical—traces how identity tensions unfold through critical incidents, professional trajectories, and contested positions around voice, authority, and legitimacy in ECEC settings (Figueroa-Céspedes, 2024; Figueroa-Céspedes & Guerra, 2023a, 2023b; Lagos-Serrano, 2022).

Importantly, research with ECEC teacher students indicates that stronger PTI is associated with perceived programme relevance, a sense of belonging, and the quality of practicum experiences, underscoring identity's personal yet institutionally conditioned character and its non-linear development across training phases (Chen et al., 2023; Olsen, 2024). Practicum design therefore emerges as a pivotal site for identity formation: well-structured placements can provide clear learning goals, scaffolded reflection, and high-quality mentoring, creating proximal conditions for identity growth (Matengu et al., 2020). Conversely, mismatches between university orientations and school cultures often constrain preservice agency and reproduce asymmetries between novices, mentors, and institutional actors (Guevara, 2020; Lagos-Serrano, 2022; Vanegas & Fuentealba, 2019).

International reviews echo this variability and call for explicit outcomes, dialogic supervision, and stronger university–school partnerships to support identity construction and professionalisation agendas (Irvine et al., 2024; Matengu et al., 2020). In Chile, schoolification and standardisation pressures further intensify these tensions in ECEC, as teachers negotiate performance demands and ‘schoolifying’ classroom scripts that may sit uneasily with relational and justice-oriented understandings of early childhood practice (Pardo & Opazo, 2019). Complementing this, critical work in preservice ECEC shows how practicum and practice-related coursework can generate “professional ruptures” that unsettle taken-for-granted images of the teacher and expose the emotional precarity of identity work, particularly when students confront deficit views of children and families or narrow institutional scripts of normalcy (Davies, 2023).

Practicum arrangements are also being reshaped by digitalisation, yet research has only begun to examine how these shifts intersect with teacher identity construction. Existing studies document the ambivalent role of parents’ WhatsApp groups and other platforms in reconfiguring family–school communication and professional boundaries (Davidson & Turin, 2021; Moyano et al., 2023). However, there remains limited empirical evidence on how preservice teachers experience digitally mediated incidents as identity-relevant turning points, particularly at the pre-practicum stage. This gap is especially visible in Latin American ECEC, where few studies explicitly bring together PTI, possible selves, and micropolitical negotiations around digital communication, despite the centrality of these interfaces in everyday school life.

### **Theoretical Framework**

Our study adopts an integrated framework in which the possible-selves and self-discrepancy perspectives (Higgins et al., 1994; Markus & Nurius, 1986) provide the primary lens for analysing how preservice teachers imagine and regulate their emerging “teacher futures.” Following Salgado and Hermans’ (2005) call to move beyond a purely representational view of the self, this lens is embedded within dialogical and sociocultural perspectives that conceptualise PTI as a dynamic, multivoiced and contextually mediated accomplishment, produced within specific institutional and micropolitical arrangements (Akkerman & Meijer, 2011; Beijaard et al., 2004; Kelchtermans & Vanassche, 2017). Taken together, these perspectives situate identity work within the relational, institutional, and digitally mediated contexts of the ECEC practicum, where possible selves are continually negotiated and recalibrated.

#### ***Possible Selves and Self-Discrepancy as a Lens on Identity-In-Motion***

Possible selves conceptualise identity as a constellation of imagined future states—*ideal selves* (who I would most like to become), *ought selves* (who I feel I should become to meet others’ expectations or obligations), and *feared selves* (who I am afraid of becoming)—that organise action, emotion, and meaning-making in the present (Markus & Nurius, 1986). This framework has been empirically used in Initial Teacher Education to examine how novices position who they hope, should, or fear becoming in response to dilemmas, uncertainty, and institutional power relations (Hamman et al., 2013; Maddamsetti & Yuan, 2023; Ryan & Irie, 2014), and methodologically operates as a bridge between biography and professional norms—simultaneously aspirational, normative, and protective—making it especially suited to early

practicum, where imagined trajectories remain fluid and highly sensitive to institutional feedback (Maddamsetti & Yuan, 2023).

Complementing this focus on imagined futures, self-discrepancy theory specifies the emotional and behavioural consequences that arise when the *Actual Self* conflicts with internalised *Ideal* or *Ought* self-guides (Higgins et al., 1994). These misalignments often manifest in guilt, frustration, anxiety, shame, or moral indignation, and can either catalyse reflective learning or prompt withdrawal—depending on whether desired selves feel attainable, recognised, and institutionally supported (Bay-Alarcón et al., 2024). In our reading, possible selves illuminate the horizons towards which preservice teachers orient their becoming, while self-discrepancy clarifies the affective charge, risks, and consequences of misalignment.

### *Dialogical and Sociocultural Perspectives as Contextualising Resources*

To situate identity work within practicum ecologies, the study draws on dialogical and sociocultural perspectives as contextualising resources. From a dialogical view, identity is multivoiced and relational, emerging through shifting positions that preservice teachers adopt in interaction with peers, mentors, families, and institutional actors (Akkerman & Meijer, 2011; Hermans, 2001). Zittoun’s (2014) semiotic perspective complements this approach by highlighting how meaning-making involves movements across temporal orientations (past, present, future) and varying degrees of abstraction, as preservice teachers mobilise prior experiences and anticipated scenarios to interpret practicum events. In this way, lived episodes, imagined futures, and shared narratives of “the good teacher” intersect, supporting future-oriented reflection while keeping the analytic focus on situated participation rather than internal dialogue alone.

Sociocultural and mediated-development approaches complement this by foregrounding how tools, norms, and communicative practices—such as mentoring arrangements, supervisory expectations, digitally mediated family–school communication—shape which possible selves appear viable or constrained (Han et al., 2020; Vygotsky, 1978). Empirically, research suggests that reflective work on practice-based experiences and future-oriented meaning-making—such as clarifying possible teacher selves—supports identity positioning and agentic sense-making in the practicum (Chávez et al., 2021; Weise & Rojas-Sasso, 2024), while positive emotional experiences can sustain early professional identity formation (Su, 2024).

At the same time, identity work is deeply conditioned by affective imaginaries and micropolitical fields (Zembylas, 2005; 2023). Institutions often privilege emotional restraint as “professional,” marginalising care-driven dissent or morally grounded discomfort through locally operating emotional rules and normative feeling expectations (Hochschild, 2012; Kelchtermans, 2005; Zembylas, 2005). Developing micropolitical literacy—the capacity to read and strategically navigate rules, hierarchies, and relationships—is therefore crucial for enacting possible selves in constrained placements (Kelchtermans & Vanassche, 2017; Wu & Chen, 2013). Collective sense-making can also convert marginality into shared agency (Hökkä et al., 2017). In contexts marked by schoolification and the public scrutiny intensified by digital family–school interfaces, these literacies and collective processes determine whether preservice teachers’ aspirational futures are amplified or silenced (Davidson & Turin, 2021; Moyano et al., 2023; Pardo & Opazo, 2019). Taken together, possible selves and possible identities allow us to examine not only what futures preservice teachers imagine, but how institutional cues determine which of those futures become motivationally salient and enactable in practicum ecologies (Oyserman & James, 2011).

## **Method**

Our study adopts a qualitative, narrative-oriented design (Riessman, 2008) to examine how three preservice early childhood teachers make sense of a shared critical incident and, in doing so, (re)shape their professional identities. Within a relational–interpretivist and constructionist–reflexive stance (Riessman, 2008; Tracy, 2021), we assume multiple, situated and historically contingent realities and treat knowledge as co-produced, so the analysis offers one credible, partial reading, among others. We understand “narrative” as participants’ storied, temporally ordered and evaluative accounts of experience, which

operate simultaneously as empirical material and interpretive lens, allowing us to trace how meanings, identities and relationships are configured across personal, institutional and sociomaterial contexts.

The inquiry is situated in the first-semester 2023 pre-practicum of a Chilean public-university ITE programme in Early Childhood Education, taken in the fourth year of a five-year degree, where candidates were placed in partner schools and early-years settings, including an experimental, humanist “laboratory” school spanning pre-K to secondary. Analytically, we distinguish this pre-practicum—a university-led, school-based placement prior to full practicum—from practicum, understood as a longer, supervised placement. In this context, pairs of students planned activities, engaged in guided reflection, and received feedback from university supervisors and cooperating teachers, with a specific focus on delivering a brief intervention to a whole class group. Purposeful sampling brought together three contrasting, yet comparable cases linked by a shared incident. Clara (21) was the youngest participant, entering the programme directly from secondary school and encountering school life for the first time from a teacher’s side. Lucía (24) came to early childhood education through sustained family caregiving, translating those experiences of care into an emerging professional project. Kali (31) combined her studies with motherhood and technical training in alternative therapies and occupying a dual position as preservice teacher at one institution and first-grade parent at the laboratory school.

The analytical focus is a critical incident that reverberated across the participants. Guided by the principle of information power (Malterud et al., 2016), the corpus was judged sufficient because a single, highly consequential shared incident, three information-rich cases, a focused aim and dense, practice-proximal data (interviews, reflective writing and co-construction) together enabled robust within-case analysis and warranted analytic generalisation, as evidenced by saturated narrative trajectories, recurring patterned tensions and the stability of central organising concepts during abductive iteration. In March 2023, at the start of pre-practicum, Clara, and Lucía—paired in pre-kindergarten—met regularly to debrief with their friend and classmate Kali, whom they treated as a “safe space” for sharing concerns and seeking feedback. In these conversations, they reported a lack of playful interactions and negative treatment of children, describing rigid bodily postures, constant reprimands and schoolifying routines that included staff shouting, while explicitly noting that there was no physical abuse. In April 2023, Kali shared these concerns in the first-grade parents’ WhatsApp group. Families then escalated the matter to school leadership, after which Clara and Lucía were summoned and instructed to terminate their placement due to an alleged “information leak.” According to participants’ accounts, no reasons were explained to them and they were not given an opportunity to respond. They experienced the removal as unilateral and non-dialogic: both were withdrawn from the school, the university warned that their progression could be jeopardised, and supervisory involvement occurred only after the decision had been taken.

We generated the corpus in three phases and analysed it as retrospective identity work, given that the incident occurred in 2023 and accounts were elicited in 2024—focusing on how participants reflexively reconstruct possible selves as they recall and recount the incident. First, two rounds of semi-structured narrative interviews (≈90 minutes each, March 2024) traced participants’ ITE trajectories and prior practicum practices, during which the critical incident at the centre of this article emerged and the biographical-contextual basis for later stages was established. Second, participants selected a critical incident from their past practicum experiences and completed an Incident Prompt and Reflective Writing Guide (RWG, June 2024), documenting one interpellating pre-practicum episode and articulating their *Actual, Ideal, Ought, and Feared Selves*. Third, a two-hour Co-Construction Group Meeting (CCGM; June 2024) provided a collective narrative space to revisit the incident, deepen interview and RWG accounts, and refine interpretations dialogically; the session prioritised psychological safety through explicit norms (primarily safeguarding confidentiality and fostering a secure space for conversation, aiming to embrace diverse perspectives without prejudice), real-time monitoring of emotional responses, and the absence of hierarchical authority.

We analysed the full corpus using reflexive thematic analysis (Braun & Clarke, 2019, 2021), understood as an interpretive, reflexive and theory-informed analytic approach that foregrounds

researcher subjectivity and meaning-making rather than coding reliability. Analysis was conducted in Spanish; English translations were used only for reporting, with quoted extracts checked against the Spanish originals to preserve meaning and nuance. The analytic process comprised five linked moves: (1) immersion across the corpus, constructing within-case vignettes that integrated prior practices, the recorded incident, and possible selves; (2) flexible semantic and latent coding; (3) abductive iteration with sensitising concepts (possible selves/self-discrepancy, dialogical positioning, micropolitical literacy); (4) cross-case mapping using a framework matrix (participant × tension × source); and (5) refinement around the central organising concept of navigating between current and possible selves. For example, the extract “I stayed silent because I feared being mistreated” (Lucía, CCGM) was coded semantically as protective silence and latently as anticipatory sanctioning. During abductive iteration, this code was connected to the sensitising concept of micropolitical literacy, supporting its placement within the cross-case tension between Authority and Dialogue.

Three higher-order themes structured the findings: *Emotional Labour* (Authenticity–Self-Regulation), *Micropolitical Agency* (Authority–Dialogue), and *Boundary Work* (Biography–Role Expectations). Given that our interpretations are theory-laden and researcher-mediated, we did not compute coder-agreement indices. Instead, we strengthened analytic quality through reflexive journaling, ongoing analytic dialogue between authors, and participant resonance checks, including attention to negative or deviant cases (Braun & Clarke, 2021). To support interpretive resonance, we shared a synthesis of the thematic account with participants in December 2024; they reported that it broadly reflected their experiences, while we retained responsibility for the final analytic claims. Both authors are university-based ITE researchers with no supervisory authority over participants; the first author led coding and writing, and the second acted as a critical peer co-analyst.

Ethical approval was granted by the Ethics Committee of Universidad Diego Portales (Resolution No. 02-2024). Participation was voluntary with written informed consent, and confidentiality was protected through pseudonyms, secure data handling, and full de-identification. No WhatsApp content was collected or analysed; all messaging references derive solely from participants’ accounts. We adopted a relational ethics stance and maintained reflexive journals to examine positionalities and power dynamics, particularly during the CCGM. Methodological quality was pursued through coherence across questions, literature, analysis, and interpretation, and through resonance with professional practice (Tracy, 2021).

### Findings

The findings are organised in two steps: first, an individual analysis of each preservice teacher’s possible selves as elicited by the incident, and then a collective reading of shared tensions and implications for teacher preparation. Although they faced the same critical incident, their narratives trace distinct identity trajectories; using the categories of *Actual*, *Ideal*, *Ought* and *Feared Selves* (Table 1), the analysis shows how expectations, emotions and decisions intersect across their formative and emerging professional pathways.

**Table 1**  
*Distribution of Possible Selves of Kali, Clara, and Lucía in the face of a Critical Incident*

Student	Actual Self	Ideal Self	Ought Self	Feared Self
Kali	Impulsive, emotionally reactive, openly critical	Dialogic and strategic advocate; affect–cognition alignment in communication	Regulate emotional expression; route concerns through procedurally safe, low-risk channels	Failing to safeguard children or producing counterproductive effects
Clara	Powerless and betrayed following unilateral institutional action; loss of trust	Dialogic, proactive problem-solver with due-process protections	Self-protection through boundary-setting while fulfilling practicum requirements	Loss of learning opportunities and adverse consequences for academic progression
Lucía	Silenced and voiceless in the face of institutional authority	Dialogic and assertive participant able to confront concerns through dialogue	Address concerns directly and responsibly within the educational team	Social retaliation, worsening treatment, or further marginalisation in the placement

## Analysis from Each Student Point of View

### *Kali: Role Conflict and Emotional Self-Regulation*

Kali frames her *Actual Self* as impulsive, emotionally reactive, and openly critical—evident in the parents' WhatsApp post that had unintended consequences for peers. She explicitly names these traits:

I am impulsive... very emotional... direct... critical (CCGM).

The post crystallised a role conflict between her student/future-teacher and mother-guardian positions (CCGM).

Her *Ideal Self* is dialogic–strategic: assertive, empathic communication grounded in an alignment of affect and cognition, enacted through careful choice of channel and timing—

It is very important to have mind and emotion aligned in order to achieve things (CCGM).

Her *Ought Self* is duty-bound and prevention-oriented, favouring restraint and procedural caution—

I should restrain myself in what I say (RWG)

—a stance she retrospectively frames as professional learning:

however much I speak... it's just empty talk, I won't achieve anything... I must think strategically (CCGM).

Her *Feared Self* centres on failing to safeguard children and producing counterproductive effects—

I fear not achieving what I expected of myself (RWG).

—a fear intensified by the irreversible consequences for her peers.

Analytically, Kali's profile reveals a sharp misalignment between her *Actual Self* (impulsive, critical) and her *Ideal Self* (assertive, strategic). While both the *Ideal* and *Ought Selves* call for regulation and deliberation, they differ in valence: the *Ideal* is aspirational and approach-oriented, whereas the *Ought Self* is duty-bound and prevention-focused. The WhatsApp disclosure—impulsive in form and consequential for classmates—brought these standards into conflict at once: it fell short of her *Ideal* of strategic assertiveness and breached her *Ought* sense of responsible conduct, intensifying frustration. In the aftermath, her self-regulation shifts toward tighter emotional control and a safer, formal pathway for raising concerns, typically through supervisor-mediated channels. Yet a *Feared Self* organised around failing to protect children adds guilt and emotional load. With mother and student/future-teacher roles overlapping, identity coherence becomes harder to sustain, foregrounding dialogical shifts between personal and professional voices and an ongoing negotiation among Actual and Possible Selves rather than a single, unified self.

### *Clara: Powerlessness and Institutional Disloyalty*

Clara positions her *Actual Self* in the wake of a sudden expulsion as one of powerlessness and breached trust, experienced as unfair and disloyal:

that sadness... how disappointing that professionals like that exist in these situations (CCGM).

Her *Ideal Self* is aspirational and dialogic–proactive: she envisages due-process engagement—

go to the educational centre... a meeting with the four students... perhaps individual meetings with the practicum supervisor present, also to take care of us as students (CCGM, June 2024)

—to resolve conflict collaboratively and protect learning. By contrast, her *Ought Self* is normative and prevention-focused, prioritising boundary-setting and self-protection while still fulfilling role duties through practice:

I think I shouldn't go to the educational centre anymore... but we still tried to implement, to make change through our contribution (CCGM).

Her *Feared Self* centres on not learning and jeopardised development—

I am afraid of harming my education... how am I going to know if I am working well with the children?... that is my biggest fear (RWG, June 2024).

Analytically, the profile shows a pronounced self-discrepancy: an *Actual Self* of helplessness versus an *Ideal* of protected, collaborative problem-solving. *Ideal* and *Ought* converge on prudence but diverge in motivational tone—approach-oriented aspiration (restore dialogue, co-decide, be heard) versus obligation/risk-avoidance (withdraw from harmful contexts, guard wellbeing). The trust breach and procedural opacity intensify frustration and trigger a safety calculus in which boundary-setting becomes rational yet developmentally costly (lost practice opportunities, threatened sense of competence). These tensions generate visible identity movements as Clara oscillates between the desire for dialogic engagement and the need for self-protection, revealing shifting negotiations among her selves. This dynamic widens the gap between *self-as-enacted* and *possible selves*, with the *Feared* amplifying anxiety about progression and recognition.

### **Lucía: Silencing and Longing for Social Assertiveness**

Lucía positions her *Actual Self* as voiceless within a hierarchical, evaluative context. She explicitly describes being unable to intervene in the face of institutional authority:

I felt voiceless... unable to say anything in front of the school... silenced (CCGM).

In her account, silence operates as a protective strategy, yet it simultaneously constrains her agency. Her *Ideal Self* is communicative, proactive and assertive:

I believe in talking within the educational centre... how to face situations, saying what we think (RWG).

Her *Ought Self* is normative and team-oriented, prescribing collaborative addressing of problems with colleagues and superiors—

Hey, don't treat the child like that (CCGM)

—i.e., voice exercised through institutional dialogue rather than withdrawal. Her *Feared Self* centres on social exclusion or mistreatment at the placement—

I was afraid that someone within the centre would hate me and that things would become even worse (CCGM)

—which heightens the interpersonal risk of speaking up.

Analytically, Lucía exhibits a clear *self-discrepancy*: an *Actual self* of protective silence versus *Ideal/Ought selves* oriented to dialogic assertiveness. *Ideal* and *Ought* converge on how to speak (collaboratively, within institutional channels) but differ in motivational tone—approach (competent, relational agency) versus obligation/risk-avoidance (avoid trouble, keep harmony). These dynamics reveal identity movements marked by oscillation between enacted silence and imagined assertiveness, producing a voice paradox in which strong internal endorsement of collaborative speech but limited enactment sustains a gap between self-as-enacted and possible selves, slowing PTI growth and reinforcing dependence on prevailing hierarchies.

### **Synthesis of Tensions: Navigating Between Current and Possible Selves**

Cross-case analysis shows persistent tensions between participants' present and possible selves that shape identity work at moments of conflict and transition. Read from participants' accounts within the pre-practicum context, these tensions appear both as individual dilemmas and as structural features of teacher education, recurring in three domains: (1) *Emotional Labour: Between Authenticity and Professional Self-Regulation*; (2) *Micropolitical Corridors of Agency: Between Vertical Authority and Dialogic Participation*; and (3) *Personal–Professional Boundary Work: Between Biography and Role Expectations*.

#### ***Emotional Labour: Between Authenticity and Professional Self-Regulation***

In this critical incident, emotional labour sits at the centre of the authenticity-(self)regulation tension. Participants describe norms of “professionalism” in which visible emotion is framed as risky and restraint is rewarded—so emotional control becomes a condition for being taken seriously rather than a pedagogical resource. The parents' WhatsApp group was pivotal. By raising practicum concerns in a parents' WhatsApp chat, Kali shifted reflection into a semi-public space with different audiences, tempos and

power relations. Its affordances (easy forwarding, screenshotability and asynchronous escalation) widened reach while heightening risk, collapsing her parent and preservice-teacher roles and recoding critique as complaint. This role collision activated a protective mother-guardian stance and brought biography into her possible-selves negotiation prompting unscaffolded ethical decisions about disclosure, channel choice and de-escalation.

Participants then enacted distinct forms of emotional labour. Kali recalibrated from advocacy-through-exposure to advocacy-through-strategy—

I need to develop effective and assertive communication (CCGM).

Clara, in turn, absorbed the consequences she associated with emotional exposure and institutional sanction (expulsion), describing

not being able to do anything” alongside “impotence (CCGM).

Crucially, she distinguishes this state from overt rage:

it “wasn’t like ‘Oh, what anger!’” but rather “that sadness... how disappointing it is that professionals like that exist in these situations (CCGM).

signalling a rupture between an *ideal learner-self* grounded in dialogue and an *actual self* rendered powerless by institutional action. Lucía, by contrast, responded through protective silence within routinised practices that constrained both teacher and child agency—

the children sitting still, unable to move... watching a PowerPoint (Interview).

a temporary adjustment that safeguards against a feared self marked by social retaliation and further mistreatment.

These emotional labours can be read as regulatory work aimed at keeping future selves viable under threat. Across accounts, participants managed fear, exposure, and moral urgency. Thus, at this level, WhatsApp operates primarily as an affective mediator, co-producing the boundary conditions of authenticity and self-regulation by shaping how preservice teachers can express themselves in relation to institutional expectations within the practicum.

### ***Micropolitical Corridors of Agency: Between Vertical Authority and Dialogic Participation***

Participants’ accounts situate agency as contingent on placement gatekeeping. Authority flowed vertically, decisions were taken unilaterally, and preservice voices were invited only after sanctions had been imposed. The expulsion meeting—convened without prior notice or a right to respond—repositioned Clara and Lucía from learners to liabilities, while supervisors entered post hoc with little leverage. As Clara put it,

When you graduate, you leave with so many ideas, enthusiasm, but then [school teams] hold you back; there is resistance (Interview).

In this context, opportunities to act were structured less by individual willingness than by organizational scripts that prized norm reproduction over pedagogical inquiry. Participants perceived this expulsion as unilateral and non-dialogic and located primary responsibility at the site for not activating inquiry/safeguarding protocols—

getting rid of us rather than addressing the problem (Kali, CCGM).

Gatekeeping thus structured the corridors of agency. Kali reported the absence of inquiry/safeguarding procedures and leadership practices that normalised shouting (“children sometimes need to be shouted at”), raising the perceived cost of speaking up; she located institutional responsibility squarely with the placement for negligent handling and lack of investigation (“the greatest blame lies with the centre [placement]”; CCGM). Clara described feeling “voiceless, silenced” and expressed a wish to have been “more dialogic and proactive” (Interview). Lucía was “shocked by the poor handling of everything” by both the school and the university, characterised the removal as “disloyal or underhand,” and questioned the absence of investigation (CCGM).

Read through a possible-selves lens, routinised scripts—taken-for-granted, rule-bound routines about who may speak, through which channel, and when—pushed *present selves* to the margins; *ideal selves* reached for dialogic problem-solving, while *feared selves* anticipated marginalisation and foreclosed learning opportunities. With due process absent, escalation pathways opaque, and supervision delayed, candidates’ micro-moves (Clara’s bids for dialogue, Lucía’s protective non-engagement, Kali’s post-hoc recalibration) were narrowed to near-inaction. Agency, then, was not absent but systematically constrained by micropolitical arrangements that fixed voice, timing, and audience.

### ***Personal–Professional Boundary Work: Between Biography and Role Expectations***

All participants’ narratives portray identity work as boundary management between lived personal selves and anticipated professional selves. The incident compressed biography, care obligations, and student status into a single moment, reshaping what participants felt able to voice. This compression was experienced not only as cognitive tension but as embodied uncertainty, captured in the collective anticipation preceding the sanction—

what did we do?, what’s going to happen to us? (CCGM).

In this way, *ideallought* trajectories (the teacher one aims/ought to be) met feared outcomes (sanction, exclusion), yielding ongoing negotiation rather than settled resolution.

Kali’s overlapping roles—as a first-grade parent, preservice teacher, and partner—collapsed into a single WhatsApp post that made child advocacy indistinguishable from institutional critique:

I thought about my daughter, and I also thought about the classmates who were indeed experiencing mistreatment (CCGM).

Her subsequent moves exemplify reflexive re-bordering and identity integration (“personal and professional aspects must go hand in hand”), shifting towards a more assertive communicative stance, where emotional self-regulation and calibrated disclosure operate as professional craft knowledge (CCGM; Interview). Clara’s expulsion reclassified her from learner to liability, fracturing belonging and converting a dialogic, due-process ideal into a feared self of lost learning and stalled development (RWG). Lucía’s bid for recognition was continuously checked by an anticipated social sanction (“that someone... would hate me”), producing protective non-participation despite valuing assertive, collaborative talk (CCGM; RWG). Across these trajectories, the sociomaterial medium (WhatsApp) functioned as a governor of visibility and consequence, amplifying reach, collapsing roles, and raising the stakes of speaking out.

Taken together, these trajectories frame boundary work as the governance of voice, channel, and disclosure under uneven protections: role collisions, sanctions, and anticipated rejection condition what can be said, which channels feel usable, and how far disclosure can go. The identity positions that emerged were plural and provisional, assembled through small, strategic moves to keep *ideallought* selves viable while containing feared consequences, within institutional scripts that, in participants’ accounts, normalised shouting and bypassed due process.

## **Discussion**

### **Pre-Practicum as an Identity Space**

This study examined how three preservice early childhood teachers negotiated their emerging Professional Teacher Identity (PTI) in the pre-practicum phase, following a shared WhatsApp-mediated critical incident that culminated in the unilateral removal of two candidates from their placement. Across cases, identity work clustered around three interrelated tensions—*emotional labour*, *micropolitical agency*, and *personal–professional boundary work*—showing how *Actual and Possible Selves* were reconfigured as participants interpreted risk, voice, and responsibility within a hybrid practicum ecology. In line with prior research (Hamman et al., 2013; Maddamsetti & Yuan, 2023; Ryan & Irie, 2014; Weise & Rojas-Sasso, 2024), our pre-practicum cases suggest that early placements already operate as identity-relevant spaces, in which recognition, participation, and exposure are actively organised. Within these settings, some identity

positions become more readily speakable, while others entail higher relational or institutional costs, shaping how preservice teachers evaluate the plausibility of different imagined teacher futures under specific institutional conditions.

### ***Feeling Rules as Curriculum: Emotional Labour and the Professionalisation of Restraint***

Across participants' accounts, emotional labour emerged as a structurally cued professional demand. What counted as "professional" conduct was repeatedly framed as emotional restraint, while visible dissent or affective expression was experienced as reputationally and institutionally risky. In Hochschild's (2012) terms, these narratives point to *institutional feeling rules* that organise what can be expressed, to whom, and at what cost. In this way, emotional control operated as a condition for being taken seriously rather than as a pedagogical resource such that managing expression became part of the professional role rather than a private coping task (Fairchild & Mikuska, 2021; Kelchtermans, 2005; Zembylas, 2005; 2023).

The WhatsApp-mediated escalation intensified these dynamics not only by amplifying visibility and consequence, but by charging the episode affectively—turning concern into exposure and uncertainty into anticipatory fear. As a semi-public, easily circulable space, the platform heightened reputational risk and recoded reflective critique as institutional complaint, collapsing roles and accelerating sanction. Within a schoolified ECEC context—where compliance-oriented routines and accountability logics narrow the legitimacy of pedagogical dissent—such exposure rendered care-based concerns particularly risky and emotionally costly (Pardo & Opazo, 2019). In this setting, emotional labour became inseparable from morally charged responsibilities of care and safeguarding, revealing how hybrid digital–institutional ecologies govern expression and containment. These findings align with evidence that recognition, trust, and emotionally safe climates are preconditions for sustainable identity development in early childhood education (Cumming & Wong, 2019; Su, 2024).

### ***When Procedures Fail: Gatekeeping, Sanction, and the Erosion of Learning***

In relation to *micropolitical agency*, in the case analysed, participants described pre-practicum settings marked by unilateral decision-making and opaque escalation pathways, requiring forms of micropolitical literacy that were unevenly accessible to preservice teachers. Gatekeeping operated vertically: sanctions were imposed without due process, preservice voices surfaced only post hoc, and supervisors intervened with limited leverage. Clara's and Lucía's removal from the placement reclassified them from learners to liabilities, revealing their restricted access to institutional scripts for negotiating conflict, protection, and accountability. By contrast, Kali attempted to navigate the school's institutional logic by attributing responsibility to the site for failing to activate inquiry and safeguarding protocols, drawing—albeit precariously—on a nascent understanding of procedural accountability.

These micropolitical arrangements fixed the timing, audience, and legitimacy of preservice voice, narrowing agency to defensive, risk-averse, or post-hoc adjustments, as evidenced in participants' accounts. Read through a possible-selves lens, routinised institutional scripts marginalised present selves, undermined the attainability of aspirational futures, and intensified feared selves linked to exclusion or stalled development (Hamman et al., 2013; Markus & Nurius, 1986; Ryan & Irie, 2014), effects that can be understood as arising from weak contextual cues and limited institutional pathways for enacting future-oriented teacher identities (Oyserman & James, 2011). More broadly, our participants' accounts suggest that when preservice teachers have limited opportunities to develop micropolitical literacy—or access to institutional knowledge about channels, audiences, and consequences—critical incidents are more likely to be lived as silencing rather than as learning opportunities (Figueroa-Céspedes, 2024; Kelchtermans, 2005; Monereo, 2023). This interpretation aligns with research showing that identity construction and participation in ECEC are deeply shaped by institutional micropolitics, particularly in contexts where professional recognition is fragile and novices lack protected spaces to rehearse dissent, judgement, and ethical positioning (Figueroa-Céspedes, 2024; Lagos-Serrano, 2022; Scherr & Johnson, 2017).

### ***Role Collision as Boundary Work: Biography, Care, and Institutional Visibility***

At the same time, participants' identity work centred on managing *boundaries between personal biography and anticipated professional roles*. In this case, the critical incident foregrounded role collision and made identity positioning consequential, because participation was filtered through hierarchical gatekeeping and the perceived risk of being sanctioned. These pressures were unevenly experienced: for Kali, biographical commitments were rapidly re-aligned with emerging professional expectations under heightened exposure; for Clara and Lucía, anticipated sanction narrowed voice and belonging. This pattern is consistent with micropolitical accounts of teacher vulnerability, recognition, and constrained agency (Figueroa-Céspedes, 2024; Kelchtermans, 2009), and it extends our prior argument that professional identity in ITE is biographically sedimented and negotiated at the personal–professional boundary (Figueroa-Céspedes & Guerra, 2023a). Such tensions are especially visible in early and intermediate practicum experiences, where preservice teachers are still learning to translate personal commitments and emerging professional ideals into situated practice under institutional conditions (Vanegas & Fuentealba, 2019).

Read through a dialogic lens, accounts of the critical incident bring into view polyphonic identity work, as preservice teachers mobilise shifting internal positions to interpret and respond to tensions at the personal–professional boundary (Akkerman & Meijer, 2011; Beijaard et al., 2004; Hermans, 2001). From this perspective, possible selves can be understood as dialogic configurations through which expectations, emotions, and responsibilities are negotiated in and through practice (Weise & Rojas-Sasso, 2024). Crucially, these negotiations are not only biographically grounded but also institutionally mediated: procedures, hierarchies, and communicative infrastructures shape visibility, risk, and consequence, thereby delimiting which identity positions and forms of participation become enactable (Davidson & Turin, 2021; Kelchtermans, 2009; Moyano et al., 2023). Taken together, the incident can be read as a site of identity liminality, where biography, internal dialogue, and institutional expectations intersect, shaping how possible teacher futures are imagined and sustained within initial teacher education.

### **From Possible Selves to Design: ZPD Scaffolds and the Viability of Teacher Futures**

Conceptually, this study extends possible-selves theory by showing that the attainability of *ideal and ought selves* is shaped by institutional imaginaries and micropolitical literacies, rather than by internal adjustment alone. While self-discrepancy theory foregrounds the cognitive–affective tensions that arise when *actual selves* diverge from *ideal, ought, or feared selves* (Higgins et al., 1994), our findings suggest that such tensions are worked through in socially organised and politically situated ways. Consistent with dialogical–developmental accounts (Akkerman & Meijer, 2011; Figueroa-Céspedes & Guerra, 2023b; Figueroa-Céspedes, 2024; Hermans, 2001; Monereo, 2023; Weise & Rojas-Sasso, 2024), identity emerges at the boundaries between selves, roles, emotions and contexts, and is patterned by norms of recognition and opportunities for participation.

From this perspective, we re-specify Vygotsky's (1978) *Zone of Proximal Development* (ZPD) as a design space for Professional Teacher Identity, where recognition, dialogic mediation and reflective artefacts (e.g., critical-incident work) may help preservice teachers move between enacted and imagined selves across the actual–potential continuum. Under a sociocultural reading, discrepancies between *actual and possible selves* appear developmentally productive to the extent that institutional conditions legitimise voice, participation, and fair process. In line with constructivist accounts that treat self-discrepancy as a driver of identity reconfiguration (Bay-Alarcón et al., 2024), our case material points to the ambivalence of possible selves in pre-practicum: they can organise meaning, motivation, and action around hoped-for, obligated, and feared teacher futures, yet their enactment is continually recalibrated through biographical commitments and shaped by affective and micropolitical conditions. Where recognition and clear escalation pathways are in place, critical incidents may function as ZPD-oriented scaffolds for ethical judgement, professional conflict, and empathic positioning; where they are not, similar incidents can narrow viable positions and mute emerging agency.

As candidates move through practicum ecologies, multiple—sometimes competing—possible selves

are dialogically voiced, intersected, and renegotiated across situations. These selves are self-authored projections that crystallise in the transitional space between being teacher students and becoming future teachers, shaping who preservice teachers hope, ought, or fear becoming under specific institutional conditions (Vanegas & Fuentealba, 2019; Weise & Rojas-Sasso, 2024). Building on Zittoun's (2014) account of semiotic movements across temporal orientations, degrees of fiction, and levels of generalisation, we conceptualise this reflexive process as an *identity multiverse*: a delimited analytical space in which candidates actively "run" alternative scenarios—testing, in practice and imagination, different communicative moves, ethical stances, and likely consequences—thereby anticipating different professional outputs and recalibrating which positions feel viable in context. In this framing, critical incidents function as prompts for iterative identity work, making salient how biographical traces and institutional conditions reorganise the salience of possible selves, and underscoring a design implication: recognition-rich ZPDs are needed to convert these simulations into mentored learning through reflective dialogue and ethical, de-escalatory communication, rather than withdrawal, silencing, or fear-based trajectories (Han et al., 2020; Vygotsky, 1978).

### **Designing Recognition-Rich Practicum Conditions in ITE**

In terms of ECEC policy and practice, our study underscores the urgency of evaluating practicum and pre-practicum ecologies not only as technical arrangements, but as lived, narrated spaces where recognition is granted, withheld, or abruptly withdrawn. Under schoolification and compliance logics, hierarchical school cultures can enforce belonging through public reprimand and abrupt removal—forms of institutionalised shaming/humiliation that can undermine learning and legitimate participation (Scherr & Johnson, 2017; Wu & Chen, 2013). In early childhood education—where professional recognition remains fragile—dissent is costly and silence rational (Lagos-Serrano, 2022). Safeguards such as *due process*, *confidential reporting*, *supervisory mediation*, and *transparent protocols* can therefore operate as *developmental resources*, *opening conversational spaces* where concerns can be voiced, interpreted, and ethically worked through, rather than sanctioned (Kamenarac, 2022; Pardo & Opazo, 2019). Our findings extend Olsen's (2024) claim that identity consolidation relies on institutional recognition and align with Davies' (2023) argument that epistemic safety is a prerequisite for novices' legitimate participation.

Building on Kamenarac's (2022) account of how market-driven and standardising pressures shape early childhood teachers' agency, we argue that ITE should equip candidates to critically navigate schoolified logics—adopting what supports learning and equity, adapting to local contexts, and resisting what erodes care and justice. From a narrative–dialogical perspective, this requires creating curricular spaces where preservice teachers can tell, retell, and collectively reframe their experiences, experimenting with different professional positions without disproportionate risk. We therefore propose three complementary curricular moves to legitimise reflective dissent and enable experiential learning: *critical-incident laboratories*, *simulated family–school communication*, and *possible-selves journals* integrated into ongoing triadic dialogues among mentors, candidates, and supervisors (Han et al., 2020; Monereo, 2023; Weise & Rojas-Sasso, 2024). Jointly assessed through university–site co-governance, these measures braid emotion, micropolitics and boundary work into the curriculum, turning vulnerability into ZPD-aligned growth and supporting well-being through fair process and dialogic mediation (Cumming & Wong, 2019; Irvine et al., 2024; Vanegas & Fuentealba, 2019). Complementary institutional reforms include *auditing incident-handling protocols*, *monitoring staff well-being*, and equipping sites with *crisis-response repertoires* (clear role delineation in supervision, de-escalation scripts, family-communication templates, after-action reviews), alongside *preservice micro-toolkits rehearsed prior to fieldwork*.

### **Methodological Boundaries and Future Directions: Capturing Identity-in-Motion**

Methodologically, the narrative design and reflexive thematic analysis delimit our claims: the study draws on a small, information-power sample from a single programme/site; it relies on retrospective accounts of a single incident (with potential recall bias); and it is shaped by researcher positionalities. Because the corpus and analysis were conducted in Spanish and the manuscript was subsequently translated into English, there is also a risk of nuance loss or interpretive drift in the translated excerpts. We

mitigated these constraints through relational ethics, reflexive journaling, coherence checks, and a bilingual translation process in which a professional translator reviewed all quoted extracts against the Spanish originals and the authors verified meaning preservation. Accordingly, transferability is framed as conceptual rather than statistical. Future research should triangulate multi-actor perspectives with ethically feasible contemporaneous artefacts (e.g., supervision records, messaging traces), adopt longitudinal and multi-voiced designs to capture identity trajectories over time, and test the proposed scaffolds through multi-site, design-based research. Comparative studies across ECEC settings with differing organisational structures, staffing models, and community contexts would further clarify how institutional conditions shape the viability of emerging teacher identities.

## Conclusion

In sum, our study suggests that critical incidents expose the affective, micropolitical and biographical tensions through which preservice early childhood teachers recalibrate their possible selves—functioning as internal simulations that can open alternative “teacher futures” rather than merely foreclose participation. Conceiving the ZPD as a design space underscores how strengthened, rights-bearing and dialogic practicum ecologies—especially in a field where professional recognition remains fragile—can help transform vulnerability into situated, justice-oriented agency, widening preservice teachers’ corridors of action while keeping learning aligned with child-centred safeguarding.

## Declarations

### *Authors’ Declarations*

**Acknowledgements:** We thank the participating educators for their engagement and trust in this research, and Camila Salas for her careful support with language editing and proofreading.

**Authors’ contributions:** IFC conceived, designed, and conducted the study; collected and analysed the data; and drafted the manuscript. EF contributed to data collection, supported the analysis, co-authored the initial draft, and critically revised the final manuscript. Both authors approved the final version.

**Competing interests:** The authors declare that they have no competing interests.

**Funding:** This work was supported by the Universidad Diego Portales Insertion/Linkage Fund (Grant 11/2023). The funders had no role in the study design; data collection, analysis, or interpretation; or in the writing of the manuscript.

**Ethics approval and consent to participate:** Ethical approval was granted by the Diego Portales University Ethics Committee (Resolution No. 02-2024). All participants received written and oral information about the study and provided written informed consent. Pseudonyms are used and confidentiality was protected throughout.

### *Publisher’s Declarations*

**Editorial Acknowledgement:** The editorial process of this article was completed under the editorship of Dr. Carmen Huser through a double-blind peer review with external reviewers.

**Publisher’s Note:** Journal of Childhood, Education & Society remains neutral with regard to jurisdictional claims in published maps and institutional affiliation.

## References

- Akkerman, S. F., & Meijer, P. C. (2011). A dialogical approach to conceptualizing teacher identity. *Teaching and Teacher Education*, 27(2), 308-319. <https://doi.org/10.1016/j.tate.2010.08.013>
- Bay-Alarcón, V., López-González, M., & Saúl, L. (2024). Identidad personal desde una perspectiva constructivista: una revisión narrativa centrada en la teoría de la discrepancia del yo. *Revista de Psicoterapia*, 35(127), 85–96. <https://doi.org/10.5944/rdp.v35i127.39568>
- Beijaard, D., Meijer, P., & Verloop, N. (2004). Reconsidering research on teachers’ professional identity. *Teaching and Teacher Education*, 20(2), 107-128. <https://doi.org/10.1016/j.tate.2003.07.001>
- Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, 11(4), 589–597. <https://doi.org/10.1080/2159676X.2019.1628806>
- Braun, V., & Clarke, V. (2021). Can I use TA? Should I use TA? Should I not use TA? Comparing reflexive thematic analysis and other pattern-based qualitative analytic approaches. *Counselling and Psychotherapy Research*, 21(1), 37–47. <https://doi.org/10.1002/capr.12360>

- Chávez, J., Faure, J., & Barril, J. (2021). The construction of teachers' professional identity: An analysis of subjective learning experiences. *European Journal of Teacher Education*, 46(2) 256–273. <https://doi.org/10.1080/02619768.2021.1905627>
- Chen, C., Ji, S., & Jiang, J. (2023). How does professional identity change over time among Chinese preservice preschool teachers? Evidence from a four-wave longitudinal study. *Teaching and Teacher Education*, 125, 104071. <https://doi.org/10.1016/j.tate.2023.104071>
- Cumming, T., & Wong, S. (2019). Towards a holistic conceptualisation of early childhood educators' work-related well-being. *Contemporary Issues in Early Childhood*, 20(3), 265–281. <https://doi.org/10.1177/1463949118772573>
- Davidson, S., & Turin, O. (2021). Preschool teachers' experience of parents' WhatsApp groups: Technological ambivalence and professional de-skilling. *Gender and Education*, 33(8), 983–998. <https://doi.org/10.1080/09540253.2021.1884195>
- Davies, A. W. J. (2023). Maddening pre-service early childhood education and care through poetics: Dismantling epistemic injustice through mad autobiographical poetics. *Contemporary Issues in Early Childhood*, 24(2), 124–146. <https://doi.org/10.1177/14639491231155555>
- Delaney, K. K. (2018). Looking away: An analysis of early childhood teaching and learning experiences framed through a quality metric. *Contemporary Issues in Early Childhood*, 19(2), 167–186. <https://doi.org/10.1177/1463949118778023>
- Fairchild, N., & Mikuska, E. (2021). Emotional labor, ordinary affects, and the early childhood education and care worker. *Gender, Work & Organization*, 28(3), 1177–1190. <https://doi.org/10.1111/gwao.12663>
- Falabella, A., Poblete, X., Lagos-Serrano, M., & Rojas, M. (2024). ¿Maestra sí, tía no? Una propuesta de profesionalización para la educación infantil desde la teoría feminista. *Práxis Educativa*, 19, e23637. <https://doi.org/10.5212/praxeduc.v.19.23637.087>
- Figueroa-Céspedes, I. (2024). 'At sea with Lucas': narrative case study of an early childhood educator faced with a critical incident/'En la mitad del mar con Lucas': estudio de caso narrativo de una maestra de educación infantil ante un incidente crítico. *Journal for the Study of Education and Development*, 47(4), 824–851. <https://doi.org/10.1177/02103702241288359>
- Figueroa-Céspedes, I., & Guerra, P. (2023a). Huellas biográficas de educadoras de párvulos en su formación inicial docente: Narrativas de la construcción de la identidad profesional. *Education Policy Analysis Archives*, 31, 87. <https://doi.org/10.14507/epaa.31.7657>
- Figueroa-Céspedes, I., & Guerra, P. (2023b). Voces en la identidad docente de educadoras de párvulos experimentadas. *Cadernos de Pesquisa*, 53. <https://doi.org/10.1590/1980531410014>
- Flores, C., Alvarado, T., Gutiérrez, T., & Medel, S. (2022). Saberes pedagógicos para la enseñanza infantil desde la perspectiva de personas educadoras de infantes. *Actualidades Investigativas en Educación*, 22(1), 4–35. <http://dx.doi.org/10.15517/aie.v22i1.47433>
- Flores, G., & González, L. (2024). Identidad profesional del/la educador/a del párvulos Chileno/a: Una revisión sistemática. *Revista Científica De Salud Y Desarrollo Humano*, 5(3), 236–261. <https://doi.org/10.61368/r.s.d.h.v5i3.256>
- González, C., & Torres, B. (2022). Identidad profesional de estudiantes de educación parvularia pertenecientes a una universidad pública regional chilena a través de sus autobiografías. *Revista Educación*, 46(2), 100–113. <https://doi.org/10.15517/revedu.v46i2.47948>
- Guevara, J. (2020). What does it mean to be an early childhood educator? Negotiating professionalism during practicum placements in Buenos Aires (Argentina). *European Early Childhood Education Research Journal*, 28(3), 439–449. <https://doi.org/10.1080/1350293X.2020.1755500>
- Hamman, D., Coward, F., Johnson, L., Lambert, M., Zhou, L., & Indiatsi, J. (2013). Teacher possible selves: How thinking about the future contributes to the formation of professional identity. *Self and Identity*, 12(3), 307–336. <https://doi.org/10.1080/15298868.2012.671955>
- Han, S., Blank, J., & Berson, I. (2020). Revisiting reflective practice in an era of teacher education reform: A self-study of an early childhood teacher education program. *Journal of Early Childhood Teacher Education*, 41(2), 162–182. <https://doi.org/10.1080/10901027.2019.1632993>
- Hermans, H. (2001). The dialogical self: Toward a theory of personal and cultural positioning. *Culture & Psychology*, 7, 243–281. <https://doi.org/10.1177/1354067X0173001>
- Higgins, E., Klein, R., & Strauman, T. (1994). Self-discrepancies: Distinguishing among self-states, self-state conflicts, and emotional vulnerabilities. In K. Yardley & T. Honess (Eds.), *Self and Identity: Psychosocial Perspectives* (pp. 173–186). John Wiley & Sons
- Hochschild, A. (2012). *The managed heart: Commercialization of human feeling*. University of California Press.
- Hökkä, P., Vähäsantanen, K., & Mahlakaarto, S. (2017). Teacher educators' collective professional agency and identity – Transforming marginality to strength. *Teaching and Teacher Education*, 63, 36–46. <https://doi.org/10.1016/j.tate.2016.12.001>
- Irvine, S., Lunn, J., Sumsion, J., Jansen, E., Sullivan, V., & Thorpe, K. (2024) Professionalization and professionalism: Quality improvement in early childhood education and care (ECEC). *Early Childhood Education Journal*, 52, 1911–1922. <https://doi.org/10.1007/s10643-023-01531-6>
- Kamenarac, O. (2022). Reconfiguring teacher agency within market-driven early childhood spaces. *Policy Futures in Education*, 21(8),

- 932-946. <https://doi.org/10.1177/14782103221110976>
- Kelchtermans, G. (2005). Teachers' emotions in educational reforms: Self-understanding, vulnerable commitment and micropolitical literacy. *Teaching and Teacher Education*, 21(8), 995–1006. <https://doi.org/10.1016/j.tate.2005.06.009>
- Kelchtermans, G. (2009). Who I am in how I teach is the message: Self-understanding, vulnerability and reflection. *Teachers and Teaching: Theory and Practice*, 15(2), 257–272. <https://doi.org/10.1080/13540600902875332>
- Kelchtermans, G., & Vanassche, E. (2017). Micropolitics in the education of teachers: Power, negotiation, and professional development. In: J. Clandinin & J. Husu (eds.), *The Sage handbook of research on teacher education* (pp. 441-456). Sage.
- Lagos-Serrano, M. (2022). Feeling like 'the ham of the sandwich': The contested professional identities of school-based early childhood educators in Chile. *Contemporary Issues in Early Childhood*, 25(1), 21-35. <https://doi.org/10.1177/14639491221120036>
- Ma, Q., & Hedges, H. (2024). A critical realist analysis of kindergarten teachers' professional identity in Chinese policy. *International Journal of Educational Research*, 128, 102491. <https://doi.org/10.1016/j.ijer.2024.102491>
- Maddamsetti, J., & Yuan, R. (2023). Primary preservice teachers' exploration of possible selves through narrated metaphors during the COVID-19 pandemic. *Research Papers in Education*, 39(5), 685-704. <https://doi.org/10.1080/02671522.2023.2212677>
- Malterud, K., Siersma, V. D., & Guassora, A. D. (2016). Sample size in qualitative interview studies: Guided by information power. *Qualitative Health Research*, 26(13), 1753–1760. <https://doi.org/10.1177/1049732315617444>
- Markus, H., & Nurius, P. (1986). Possible selves. *American Psychologist*, 41(9), 954-969. <https://doi.org/10.1037/0003-066X.41.9.954>
- Matengu, M., Ylitapio-Mäntylä, O., & Puroila, A. M. (2020). Early childhood teacher education practicums: A literature review. *Scandinavian Journal of Educational Research*, 65(6), 1156–1170. <https://doi.org/10.1080/00313831.2020.1833245>
- Monereo, C. (2023). Aprender de las crisis. Los incidentes críticos como metodología para educar, también, emocionalmente. *Revista Internacional de Educación Emocional y Bienestar*, 3(1), 15-37. <https://doi.org/10.48102/rieeb.2023.3.1.43>
- Moyano, C., Tabilo, I., Vera, M. I., & Alarcón, S. (2023). Normative becoming in the digital sphere: WhatsApp parents' groups in Chilean education. *Education Policy Analysis Archives*, 31, 138. <https://doi.org/10.14507/epaa.31.7907>
- Oliveira, R., & Viviani, L. (2019). Entre a fralda e a lousa: A questão das identidades docentes em berçários. *Revista Portuguesa De Educação*, 32(1), 73–90. <https://doi.org/10.21814/rpe.14947>
- Olsen, M. (2024). Predictors of professional identity among early childhood education and care teacher students. *Education Sciences*, 14(3), 259. <https://doi.org/10.3390/educsci14030259>
- Oyserman, D., & James, L. (2011). Possible identities. In S. Schwartz, K. Luyckx & V. Vignoles (Eds.), *Handbook of identity theory and research* (pp. 117-145). Springer.
- Pardo, M., & Opazo, M. J. (2019). Resisting schoolification from the classroom. Exploring the professional identity of early childhood teachers in Chile/Resistiendo la escolarización desde el aula. Explorando la identidad profesional de las docentes de primera infancia en Chile. *Culture and Education*, 31(1), 67-92. <https://doi.org/10.1080/11356405.2018.1559490>
- Riessman, C. (2008). *Narrative methods for the human sciences*. Sage.
- Robson, J., & Martin, E. (2019). How do early childhood education leaders navigate ethical dilemmas within the context of marketised provision in England? *Contemporary Issues in Early Childhood*, 20(1), 93-103. <https://doi.org/10.1177/1463949119827031>
- Rushton, E., Rawlings, E., Steadman S. & Towers, E. (2023). Understanding teacher identity in teachers' professional lives: A systematic review of the literature. *Review of Education*, 11(2), e34172. <https://doi.org/10.1002/rev3.3417>
- Ryan, S., & Irie, K. (2014). Imagined and possible selves: Stories we tell ourselves about ourselves. In S. Mercer & M. Williams (Eds.), *Multiple perspectives on the self in SLA* (pp. 109-126). Multilingual Matters.
- Salgado, J., & Hermans, H. (2005). The return of subjectivity: From a multiplicity of selves to the dialogical self. *E-Journal of Applied Psychology: Clinical Section*, 1(1), 3–13. <https://doi.org/10.7790/ejap.v1i1.3>
- Scherr, M. & Johnson, T. (2017). The construction of preschool teacher identity in the public-school context. *Early Child Development and Care*, 189(7), 405–415. <http://doi.org/10.1080/03004430.2017.1324435>
- Su, Y. (2024). Positive emotional experiences and professional identity formation in novice preschool teachers in Taiwan. *European Early Childhood Education Research Journal*, 33(4), 612–630. <https://doi.org/10.1080/1350293X.2024.2418019>
- Tracy, S. (2021). Calidad cualitativa: ocho pilares para una investigación cualitativa de calidad. *Márgenes Revista De Educación De La Universidad De Málaga*, 2(2), 173-201. <https://doi.org/10.24310/mgnmar.v2i2.10016>
- Vanegas, C., & Fuentealba, A. (2019). Identidad profesional docente, reflexión y práctica pedagógica: Consideraciones claves para la formación de profesores. *Perspectiva Educacional*, 58(1), 115-138. <https://dx.doi.org/10.4151/07189729-vol.58-iss.1-art.780>
- Vygotsky, L. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Weatherby-Fell, N., Duchesne, S., & Neilsen-Hewett, C. (2019). Preparing and supporting early childhood pre-service teachers in their

Imagining futures: Possible selves and professional identity...

- professional journey. *The Australian Educational Researcher*, 46(4), 621-637. <http://dx.doi.org/10.1007/s13384-019-00340-4>
- Weise, C., & Rojas-Sasso, P. (2024). Neither student nor teacher? Possible selves in the development of faculty identity during the practicum. *Journal for the Study of Education and Development*, 47(4), 768-795. <http://dx.doi.org/10.1177/02103702241286402>
- Wu, Y., & Chen, C. (2013). Examining the micropolitical literacy of science intern teachers in Taiwan. *Journal of Baltic Science Education*, 12(4), 440-451. <http://dx.doi.org/10.33225/jbse/13.12.440>
- Zembylas, M. (2005). Discursive practices, genealogies, and emotional rules: A poststructuralist view on emotion and identity in teaching. *Teaching and Teacher Education*, 21(8), 935-948. <https://doi.org/10.1016/j.tate.2005.06.005>
- Zembylas, M. (2023). The analytical potential of 'affective imaginaries' in higher education research. *Education Inquiry*, 16(3), 342-357. <https://doi.org/10.1080/20004508.2023.2223781>
- Zittoun, T. (2014). Three dimensions of dialogical movement. *New Ideas in Psychology*, 32, 99-106. <https://doi.org/10.1016/j.newideapsych.2013.05.006>

# Applying activity theory to examine mobile application mediation of engagement and curriculum tensions in Chinese preschool

Yufan Zhang<sup>1</sup>, Nurul Nadwa Zulkifli<sup>2</sup>, Ahmad Fauzi Mohd Ayub<sup>3</sup>, Nur Raihan Che Nawî<sup>4</sup>

**Abstract:** As a response to the global impact of educational technology, the incorporation of technological tools into Chinese kindergarten settings is increasing. However, this has created a tension between using interactive technologies to increase student engagement, while still aligning with national early childhood education standards which advocate for hands-on, culturally responsive forms of learning. This study applies Activity Theory to better understand this systemic tension, while exploring the integration of a mobile app entitled "Preschool Treasure" within kindergarten settings. Through a qualitative single case study approach and drawing upon multiple data collection methods, including interviews with 6 teachers, 20 video observations of classroom practices, and policy document analyses, this study examined the relationships among digital tools, educational agents and 1 educational institution. The study revealed that contradictions between the design of the app and its pedagogical objectives have become educational possibilities instead of educational barriers. This research illustrates how the educators perceived the imperative to modify their pedagogical intentions during the incorporation of the application into their practice. By exploring a new application of mobile technology in Chinese kindergartens, this research highlights key drivers of sustainable integration: user engagement, cultural adaptability, and teacher professional autonomy. The study presents a pathway towards educational technology co-design that is collaborative and supports educators' contextual and curricular priorities.

## Article History

Received: 13 October 2025

Accepted: 20 January 2026

## Keywords

Digital teaching tool; Digital resources; Chinese preschool education; Activity theory

## Introduction

Globally, educators are taking advantage of more digital tools in early childhood education to increase student engagement, as well as student learning outcomes (Grimus, 2020). This is formally encouraged in China by the Ministry of Education of the People's Republic of China (MOE) with the call for the digital transformation of early childhood education (Ministry of Education of the People's Republic of China, 2025). Kindergarten teachers in China face systemic contradictions where interactive technologies like mobile apps risk displacing hands-on, culturally rooted pedagogies mandated by national standards (Huang et al., 2019). Despite the benefits of modernization, teachers in China are confronted with a conundrum between the need for culturally relevant practices and a reliance on standardized digital capabilities. Recent increases in the use of standardized mobile applications provide many engaging digital tools that allow children the advantage of engaging in creative and active learning, however teachers in Chinese kindergarten find it challenging to connect these two forms of instruction with the use of culturally relevant pedagogy mandated by their national standard. While interactive mobile application like "Preschool Treasure" are being used more frequently, kindergarten teachers are still challenged to situate their interactive features within established lesson plans, ultimately presenting a tension between new educational practices through technology and existing educational norms involving playfulness and

<sup>1</sup> University of Putra Malaysia, Faculty of Educational Studies, Department of Science and Technical Education, Serdang, Malaysia, e-mail: [gs61700@student.upm.edu.my](mailto:gs61700@student.upm.edu.my), ORCID: <https://orcid.org/0009-0004-7617-4485>

<sup>2</sup> University of Putra Malaysia Sarawak, Faculty of Humanities, Management and Science, Department of Science and Technology Directory, Bintulu, Malaysia, e-mail: [nurulnadwa@upm.edu.my](mailto:nurulnadwa@upm.edu.my), ORCID: <https://orcid.org/0000-0002-2232-3885>

<sup>3</sup> University of Putra Malaysia, Faculty of Educational Studies, Department of Science and Technical Education, Serdang, Malaysia, e-mail: [afmy@upm.edu.my](mailto:afmy@upm.edu.my), ORCID: <https://orcid.org/0000-0002-4313-2922>

<sup>4</sup> University of Putra Malaysia, Faculty of Educational Studies, Department of Professional Development and Continuing Education, Serdang, Malaysia, e-mail: [nurraihan@upm.edu.my](mailto:nurraihan@upm.edu.my), ORCID: <https://orcid.org/0000-0002-7210-9430>

cultural relevance.

Although digital teaching may focus on subject specific academic goals in Primary Education, preschool focuses on developing holistically, including social skills and peer culture (Parker & Thomsen, 2019). For example, according to Palaiologou (2020), teacher's ability to successfully integrate digital tools into their play-based curriculum is a frequent challenge. As such, many early childhood educators are looking for ways to support social interactions through digital tools instead of providing isolated instruction with these digital tools (Ford et al., 2021; Undheim, 2022). To facilitate engagement, there needs to be consideration when developing a mobile application in the early childhood classroom, to assist teachers and students in meeting their needs. To achieve meaningful use of mobile applications in this context, it is necessary for researchers to move beyond examining just the application's functionality. Investigating the relationship between the cost, ease of use, and adherence to national curriculum standards is very important since these factors are critical to meeting students' and educators' true needs. The interaction between digital tools being introduced into an established community has proven to be a complex issue that requires further thought. Because Activity Theory provides an analytical framework to identify and analyze conflicting elements of the overall learning environment, researchers will utilize Activity Theory (AT) in this research project to understand how mobile applications can be successfully integrated into a kindergarten in China on a long-term basis.

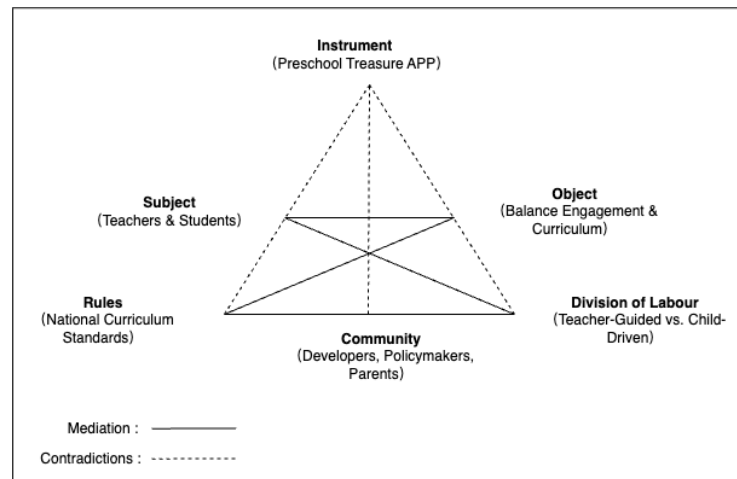
AT and the cultural debate to analyze these complex dynamics, for the purpose of analyzing the complexity associated with these interactions, the present research study uses the third generation Activity Theory (Engeström, 2014) as the framework through which to inform its analysis of the data. The third generation AT provides an alternative theoretical approach to viewing the use of technology in the classroom; rather than viewing the use of technology in the classroom as an isolated instance of technology use, the AT provides an opportunity to view the integration of technology in the classroom as a system of interacting parts that includes multiple sources of interaction. The Activity Theory consists of six interconnected elements: (1) Subject (students, teachers) seeking an Object (educational outcomes such as engagement, numeracy), mediated by the Tool (Preschool Treasure application), (2) Rules (implicit and explicit; e.g., national policy, cultural norms), (3) Community (families, school administrators), and (4) Division of Labor (roles within the classroom). AT establishes an innovative research framework to examine the collective outcomes generated by educational tools and subjects (Burner & Svendsen, 2020; Engeström, 2020). As Zhou and Yang (2025) explain in their research on STEM education, Activity Theory maps the interrelationships between curriculum and technology in Early Childhood Education. In particular, Engeström (2014) identifies Activity Theory as a mechanism for examining the integration of technology into learning environments by highlighting the interactions of tool, subject and object to inform effective technology integration. Educational technology research frequently examines how digital tools alter student interaction and engagement. For instance, Liaw et al. (2010) highlighted the significance of these tools in facilitating collaborative learning. There is information on the link between changing the curriculum and getting children involved in early childhood education using AT, especially in Chinese preschools outside of Western countries.

The current study was driven specifically by previous discussions about the significance of cultural context in Activity Theory. While many articles prior to this have shown that contradictions between nodes (contradictions in systemic structure) are the primary driver of innovation in Activity Theory, researchers have pointed out that several Activity Theory articles and studies do not apply sufficient theory to explain the impact local culture has on Activity Theory's application (Cong-Lem, 2022; Schmidt & Tawfik, 2022). Hopwood (2022) and Pettersson (2021) demonstrate how Activity Theory often considers digital tools to be "culturally neutral", overlooking their incompatibility with the educational values of many non-Western cultures. To fill this void, the present study analyzes the Rule-Tool contradiction as it appears in a Chinese context. We assert that the dissonance between the standard design practices of Western educational app developers (Tools) and China's policy mandates for "culturally responsive pedagogy" (Rules) is more than a technical issue, it represents a vital theoretical point of reference for understanding how cultural adaptability serves as a mediator for creating an Activity Theory.

This study addresses this theoretical gap by examining the Rule-Tool contradiction in a Chinese context. We propose that the dichotomy of China's national policy regarding culturally appropriate pedagogy (Rule) versus educational applications (Tool) creates a theoretical space for understanding how cultural adaptability serves as a missing link between Activity Theory.

**Figure 1**

*Activity Theory Framework for Preschool Treasure Integration*



Through the use of Activity Theory frameworks, Activity Theory provides a lens to view the ways in which the design of the app does not support the educational purposes of the app being developed. The following diagram illustrates how the dual integration of Preschool Treasure creates systemically based contradictions. For example, during a math lesson in an urban kindergarten classroom, students were more focused on dragging animated pandas (the tool) than ordering numbers (the object). The instructor was subsequently forced to revert to physical manipulatives, thereby dividing the work through both physical objects use and the use of technology. These cases are consistent with Engeström's assertion that contradictions are not weaknesses, but rather opportunities to reconfigure our tools and practice (Engeström, 2014). This framework makes evident that many of us continue to employ tools that are not aligned with either our cultural or curricular goals, as well as potential solutions such as modular app design. Given the complicated, multilayered, and sociocultural nature of the challenges of integrating mobile apps into preschools in China, an analytical framework that moves away from simplistic cause-and-effect relationships and instead examines the sociocultural tensions that exist in the educational context is necessary. This research employs Activity Theory as the analytical framework to explore the interdependent and multidimensional ways that human activity works.

Studies on technology utilization in early childhood education focus on cognitive outcomes (Hamilton et al., 2021; Mertala, 2019) and teacher acceptance (Granić & Marangunić, 2019; Scherer et al., 2019), ignoring the inherent contradictions associated with these pedagogical approaches. Activity Theory employs contradictions to facilitate change (Blayone, 2019; Von Fircks, 2024) while offering a comprehensive framework for analyzing teaching environments, encompassing teachers, children, resources, regulations, and learning outcomes. The framework shows that integrating technology goes beyond just installing it; components need to be able to handle interactive tensions in real time. Research does not employ systematic methodologies to elucidate the utilization of mediation by mobile applications as a resolution for classroom contradictions, thereby impeding effective and sustainable pedagogical advancement.

Chinese preschool observations along with media reports validate three ongoing contradictions in educational practices. Preschool teachers encounter difficulties when integrating Augmented Reality (AR)-based storytelling activities within app-initiated curricula due to fixed educational sufficiency periods (Dias et al., 2020; Yan & Wang, 2022). The gamified approach of Babybus cited in Khasanah et al. (2023) does not provide enough flexibility to accommodate curriculum-specific needs such as ethnic minority

cultural integration in rural areas thus causing tool-design to disconnect from educational objectives. Professional development programs never teach teachers how to think critically about the relationship between technology and child development while improving teachers' app operations and technical abilities (Núñez, 2023). The issues show a broken relationship where mobile apps present one of two problems either they force strict assignments or break learning structure through multiple disconnected tools.

This research constructs Activity Theory to study mobile application mediation of the education system dilemmas between student engagement and curricular adaptation within Chinese preschools. The research depends on contradiction analysis to create practical and theoretical knowledge regarding human-centered technology integration. Specifically, it explores:

RQ1: How do contradictions within the preschool Activity Theory shape the integration pathways of mobile applications?

RQ2: What mediating role does application design play in aligning curriculum adaptability with sustained child participation?

RQ3: How do teachers negotiate the tension between strict curriculum standards and the demand for interactive, technology-enhanced pedagogies?

### Method

The research adopted a qualitative case study design to explore the integration of the *Preschool Treasure* a mobile application designed to assist teachers by incorporating kindergarten lesson plans, activity schemes, and schedules, into Chinese kindergarten teaching practices, while facilitating student engagement for curriculum reform. Given the complex ecological context of Chinese kindergartens, this study adopted a qualitative approach similar to prior investigations of early childhood technology (Weng & Li, 2020; Yang & Dong, 2024). This method allowed for the collection of rich, descriptive data regarding the *Preschool Treasure* app's function and its impact on teachers and students nuances that are critical for understanding sustainable integration (Creswell & Poth, 2016). Three primary methods: semi-structured interviews, classroom observations, and document analysis were employed to collect data, thereby ensuring methodological triangulation to enhance the research's validity (Bell et al., 2019; Morgan, 2022; Ruslin et al., 2022).

### Participants

Six teachers were purposively selected from a Chinese kindergarten context, which serves children aged 3 to 6 years. Participants were chosen based on their demonstrated digital proficiency in the classroom. Table 1 displays the diverse range of teaching experiences and educational backgrounds represented by the participants. This ensured that the sample would capture knowledge of how the application worked in a variety of teaching situations.

**Table 1**  
*Participants Profiles*

Teacher	Years of Teaching Experience	Educational Background	Classroom Size
A	Half Year	Master's in Early Childhood Education	25 Students
B	20 years	Diploma in Early Childhood Education	20 Students
C	5 years	Master's in Early Childhood Education	22 Students
D	3 years	Masters in Curriculum Design	24 Students
E	9 years	Bachelor's in Early Childhood Education	18 Students
F	2 years	Master's in Early Childhood Education	23 Students

### Data Collection

This study employs a qualitative research design grounded in Activity Theory to thoroughly investigate the mediating role of mobile applications in preschool classrooms. Through multiple qualitative

data sources, it seeks to interpret the complexities of teacher-child-tool interactions. Triangulating semi-structured interviews, participant classroom observations, and document analysis, the research emphasizes interpretive understanding of subjective experiences, contextual practices, and textual meanings. To ensure the reliability and depth of the data, classroom observations were conducted using a systematic and rigorous procedure. The observations took place at the public kindergarten in the northwest region of China.

The table below details the qualitative data collection procedures, analytical strategies, and their alignment with the research questions.

**Table 2**  
*Data Collection Details*

<b>Data Collection Method</b>	<b>Data Collection Details</b>	<b>Analysis Approach</b>	<b>Link to Research Questions</b>
<b>Semi-structured Interviews</b>	Participants: Preschool teachers (6) and app developers (2). Format: Audio-recorded, 30–45 minutes per session. Focus: <ul style="list-style-type: none"> <li>Teachers lived experiences of tensions between curriculum and engagement.</li> <li>Perceptions of app design’s adaptability.</li> <li>Narratives of negotiating structured vs. emergent practices.</li> </ul> Tools: Interview guide with open-ended questions.	Interpretive Thematic Analysis: <ul style="list-style-type: none"> <li>Transcribe and iteratively code transcripts.</li> <li>Generate themes.</li> <li>Interpret themes through Activity Theory’s contradictions and mediation concepts.</li> </ul>	RQ1: Uncover contradictions in the activity system.  RQ3: Reveal teachers’ meaning making in tension negotiation.
<b>Classroom Observations</b>	Scope: 20 classrooms using Preschool Treasure. Duration: 2–3 weeks per classroom; 15 hours of video/field notes per site. Focus: <ul style="list-style-type: none"> <li>Naturalistic teacher-child-app interactions.</li> <li>Contextual factors shaping curriculum adaptation.</li> <li>Emergent engagement patterns.</li> </ul> Process: <ul style="list-style-type: none"> <li>Collected contextual information related to the environment where the study was taking place</li> <li>Recorded a chronological log of both teacher and student behavior as well as technical fidelity</li> <li>Used a thematic checklist to assess how often teachers engaged in different pedagogical (teaching-related) behaviors</li> </ul> Tools: Field notes, selective audio-visual recordings (ethically approved).	Activity System Mapping: <ul style="list-style-type: none"> <li>Code interactions using AT components (subjects, tools, rules).</li> <li>Identify contradictions through critical incident analysis.</li> <li>Construct vignettes to illustrate mediation processes.</li> </ul>	RQ1 & RQ2: Explore how contradictions manifest in practice and how tools mediate them.  RQ3: Contextualize teacher strategies.
<b>Document Analysis</b>	Sources: <ul style="list-style-type: none"> <li>Teacher lesson plans (digital/physical).</li> <li>App design documents.</li> <li>Institutional policy texts.</li> </ul> Focus: Discursive alignment between stated goals and operational practices.	Critical Content Analysis: <ul style="list-style-type: none"> <li>Thematically code documents for implicit/explicit contradictions.</li> <li>Compare policy rhetoric with classroom/app design realities.</li> <li>Triangulate with interview and observation data.</li> </ul>	RQ2: Examine how design documents mediate (or hinder) curriculum-engagement alignment. RQ1: Trace systemic contradictions in policy-practice gaps.

## Data Analysis

Data analysis follows an interpretive qualitative paradigm, constructing meanings through iterative engagement with data and Activity Theory. First, interview transcripts are line-by-line coded in NVivo to generate open codes, refined via constant comparison into themes and mapped to AT nodes. Data analysis is conducted from the collected observational information using activity system mapping, identifying major events and developing vignettes to demonstrate mediated action. Document review is conducted

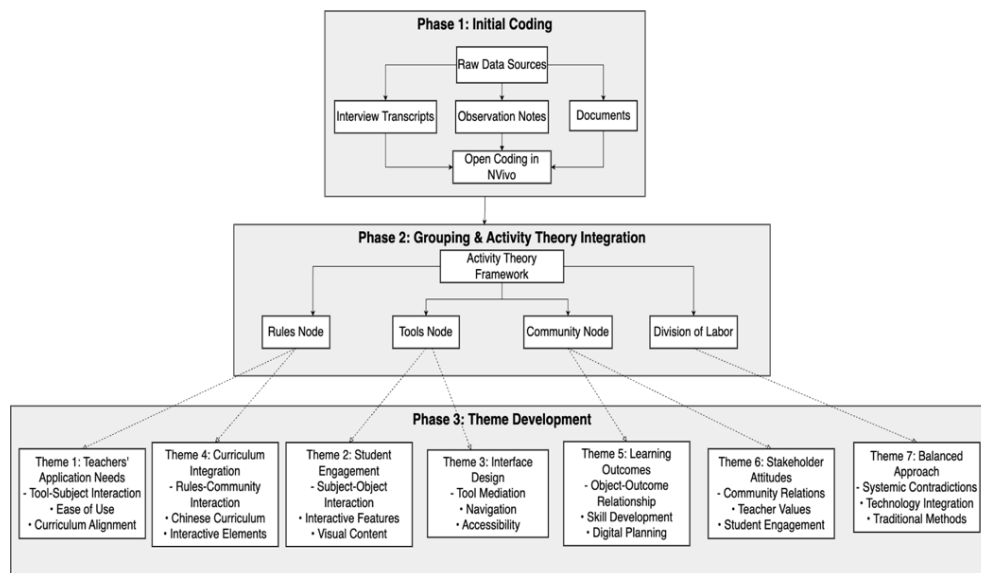
using critical discourse analysis. Triangulation, along with reflexive journaling, has been utilized as verification techniques to ensure validity and eliminate researcher bias.

The study used thematic analysis to examine the interview transcripts, observation notes, and documents. In this process, an inductive-deductive method was applied to the data with open codes generated first (Braun & Clarke, 2023), followed by the application of the Activity Theory Framework. A systematic three-phase method based on the Activity Theory Framework and qualitative methodology was applied to analyze the interview transcripts. During phase 1, the transcript of the interview, observation notes, and documents were reviewed line-by-line in NVivo for open codes. Using the constant comparison method, detailed notes were created for significant codes. In phase 2, codes were grouped into categories and matched with Activity Theory nodes to identify systemic contradictions and create activity theory maps for critical incidents. In the third phase of theme development, the codes developed based on theory were synthesized into 7 major themes, each linked with a particular component of Activity Theory as depicted in Figure 2. These themes responded to research questions related to the contradictions in the preschool activity theory framework, the mediation of curriculum delivery by Application Design, and teachers' response to the tensions caused by structured curricular delivery methods compared to technology-mediated engagement practices.

Although the primary coding was completed by the lead researcher to maintain consistency in the study, validation of findings through member checking with participant teachers and peer debriefing for further creation of coding structures assured that findings were validated and not merely the individual bias of the researcher (Creswell & Poth, 2016). The systematic approach allowed for a comprehensive examination of the data providing insights into the complex dynamics surrounding the integration of the “Preschool Treasure” mobile application.

Building on this analytical framework, the themes identified in this study emerged through a deliberate and iterative qualitative data collection and analysis approach. These were closely related to the four main research questions of the study, which aimed on comprehending the usage of the Preschool Treasure app in Chinese kindergarten classrooms.

**Figure 2**  
*Data Analysis Process*



## Validity and Reliability

In order to minimize researcher bias and rely on empirical data instead of recalling from memory, we added descriptions of the quality assurance steps, we take during our rigorous data collection process. Included in this process are the use of video recordings so that researchers could verify their live field notes and backtrack if necessary to provide retrospective verification, the use of thematic checklists for behavior

tracking after every session so that researchers can accurately identify critical incidents. The investigation was validated through three methods which included both methodological triangulation and member checking and reflexivity. Member checking provided interview participants with the opportunity to validate research results, but methodological triangulation used cross-analyses between interviews and observations alongside documents. Team sessions performed regularly functioned to maintain reflexivity through the discussion of researcher biases. According to Cypress (2017) these methods followed established qualitative research protocols to enhance reliability together with credibility of the study.

This study took place in a kindergarten with both teachers and children as participants. Due to the nature of the setting, ethics were of utmost importance throughout the research process. The study has followed the ethics outlined by an University as well as the ethics required by the kindergarten in China in which the research was conducted. Permission from the kindergarten was obtained before beginning any data collection. The teachers were given an information sheet about the study including the purpose of the study, how it would be conducted and possible risk associated with the study. All six teachers were asked to provide written consent to participate in the study and were informed in writing that they could withdraw from the study at any time without penalty or prejudice professionally. While the teachers were the main participants in the study, children were also part of the observation process. Therefore, passive consent notifications were sent to parents informing them of the researcher's presence and the use of video recording for research purposes. To help ensure participant privacy during the study, anonymity and confidentiality procedures were followed strictly. Therefore, the names of the kindergarten and teachers were changed (e.g., Teacher A, Teacher B) in all transcripts and final reports. Any identifiable information of students that was included in the observations was redacted. The data collected during the study included video recordings of 20 observation sessions as well as audio recordings of interviews. All such raw data is stored securely on a password-protected and encrypted hard drive with access limited to the researcher. It is important to note that the researcher acted in a non-intrusive manner while conducting the observations, in order to minimize disruptions to the learning environment. The observational protocol was designed to ensure that neither the use of the "Preschool Treasure" app nor the research process could negatively impact the psychological well-being or educational progress of the students or teachers.

## Findings

The first round of coding produced many commonalities about how the teachers used the Preschool Treasure application. The computer programmers derived codes from their review of the digital transcripts of the interviews through an iterative process that produced codes such as, "app navigation struggles" and "unexpected child discoveries," with, "curricular alignment struggles." Teacher A shared how children would become so captivated by the characters from Preschool Treasure, that they were distracted from the learning rationale behind the activity. Teacher A also described the interface of engagement (children's curiosity and interest) overtaking the learning during a segment of the interview, which he termed "engagement-learning tension." The observation notes showed that the children were very engaged during the interactive experience, but they didn't connect what they learned to any of the learning goals that had already been set for the activity. The researchers engaged in a continuous comparison process that not only improved their initial coding but also facilitated the recognition of the nuances between the use of technology in preschool (or classroom) settings and its applications for learning objectives by analyzing how pedagogical expectations (transitions) were identified in the classroom.

The comprehensive mapping of the codes helped to identify systemic relationships among the components of Activity Theory, which was an important part of the coding process. The "app navigation struggles" codes were placed under the Tools part of the analysis. This gave the researcher an indication that children had trouble finding their way around when they used Preschool Treasure to learn. By mapping the data to the Rules node of the activity system, the analysis examined the alignment of learning goals. This process revealed a systemic contradiction: a clear misalignment existed between the application (Tools) and the pedagogical expectations mandated by institutional policy (Rules). The coding of parent-teacher communication regarding the app's utilization was categorized under the Community mapping

dimension, as these communications between the teacher and parents influenced the implementation of the application. When teachers used *Preschool Treasure* to analyze the division of labor, they changed their responsibilities or teaching roles. The children acted as navigation guides while the teachers were there to help. In the end, the researcher found two types of contradictions: first, between the app's features and the teachers, and second, between the app's features and the curriculum requirements, which included the level of difficulty or the intended learning content.

The Activity Theory defined codes were explored through analysis that led to meaningful themes in the coding process. The theme of “Digital Navigation Competence” emerged as a theme from analyses of the tool subject elements (activity theory framework), recognizing how teachers' technical competence played a role on what happened during implementation. The theme of “Curriculum-Technology Synergy” evolved from the examines of the rules-community-tools, addressing how teachers negotiated between prescriptive learning outcomes and functions of the application. In describing one of the teachers' experiences she explained,

I use the treasure collections (digital badges) when we complete our phonics lesson. I see it grow naturally together, with our curriculum.

A third theme had to do with the evolving dynamics present in the classroom and emerged during the analysis phase of the division of labor, as the teachers role shifted from educators to facilitators guided by student exploration through app use. Each theme corresponded directly with the components from the Activity Theory framework while correlating with research questions pertaining to contradictions experienced in the preschool context and educators reconciliations toward the balance of well-established learning and the engagement possibilities offered through technology.

### Observation Note

During a three-week classroom observation, the researcher focused on the integration of *Preschool Treasure* in a kindergarten math activity. Through participatory field notes and thick description, a core contradiction emerged between tool mediation and curricular objectives. For instance, in a “number sequencing” task using the app's drag-and-drop game, the teacher aimed to enhance children's numeracy skills. However, observation records revealed:

Children A repeatedly clicked on animated animal icons, accidentally covering number cards. Teacher B reminded, ‘Finish the task first,’ yet Child A persisted in exploring animations. Eventually, Teacher B closed the app and switched to physical number cards. (Observation Date:05/11/2024, Class: Senior Group)

Such incidents were coded as tool-object contradictions: While the app's interactive design (tool) intended to boost engagement, its entertainment elements (e.g., animations) diverted attention from the core objective (number sequencing). Activity system mapping further identified teachers' mediation strategies.

### Documents Analysis

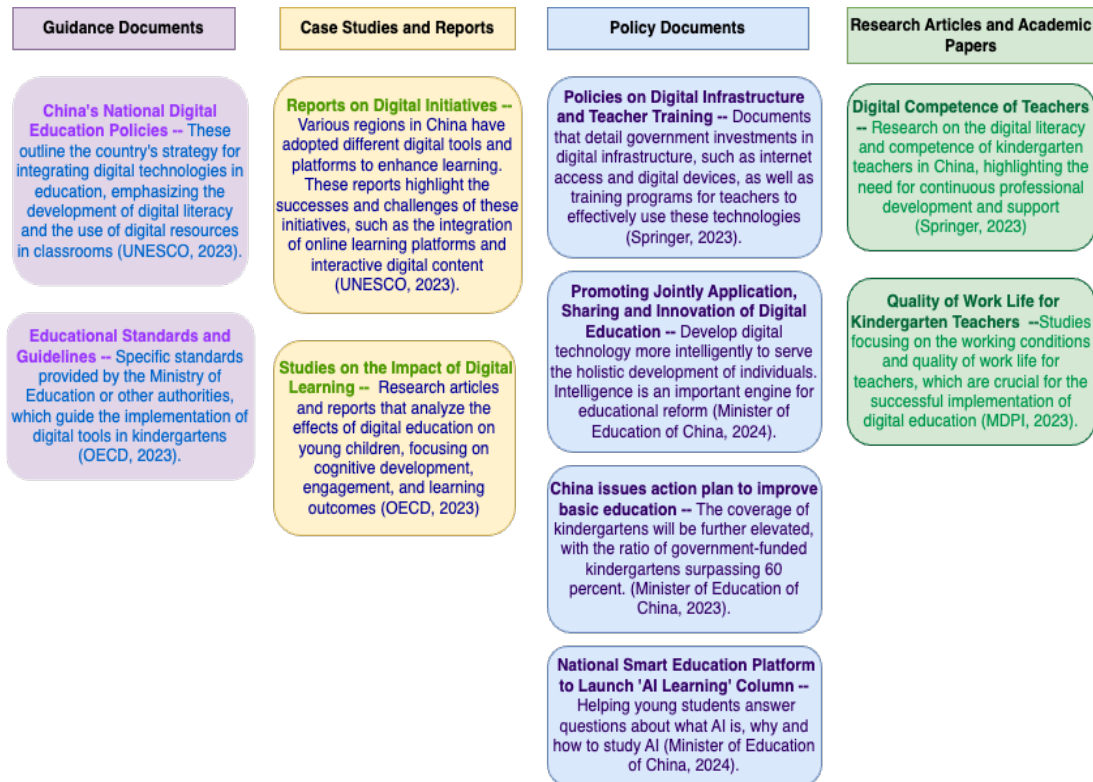
The analysis of documents for *Preschool Treasure* included the developer's guidelines, the local preschool curriculum frameworks, and the regional Digital Education Guidelines for Preschools. Through an analysis of the documents using Critical Discourse Analysis, the discrepancies between technical scalability and localization of the curriculum became evident. The Developer Guidelines stated “standardized design for Scientific Rigor”, and the kindergarten curriculum required “Culturally Responsive Emergent Activities.” For example, the Developer Guidelines recommended that Math modules be aligned to National Numeracy Standards; however, the document did not provide any support for teachers to adapt their modules where necessary to reflect the students' cultural background. Teacher C stated,

I wanted to add abacus elements but the Game Rules were locked out on the application.

These discrepancies have been coded as a rule-tool conflict in the analysis because the policy documents (rules) suggested some flexibility, while the app's standardized design (tool) restricted this flexibility.

When comparing the data from the document analysis to the data from the interviews, it became evident that teachers felt restricted by the app’s inability to allow them to customize content to meet their unique student population’s needs. As a result, mobile apps must provide a balance between standardized content and modularity to allow dynamic adaptation to the needs of the curriculum being taught.

**Figure 3**  
Documents Display



Activity Theory provides the theoretical framework for this research, which seeks to understand ways in which Educational Activities are presented as dynamic systems mediated by tools (Holland & Lave, 2019). In this context, *Preschool Treasure* functions as a mediating tool that shapes the relationship between teaching strategies and learning outcomes. The *Preschool Treasure* was thus viewed as a tool to mediate the link between instructional strategies and the resulting learning outcomes. These policy documents cement the understanding of the relationship between teaching strategies and learning outcomes in education and reveal a systemic view of contradictions imposed by the use of technology-based methods in education. Chinese National Policy texts such as the Digital Educational Policy and the Guidelines for Digitalization in Early Childhood Education provided a framework for developing technology-mediated learning in specifying the importance of culturally relevant design and delivering dynamic curricula as a standard in developing technology-mediated methodologies. However, when such elements and educational outcomes are introduced through the technical documentation for *Preschool Treasure*, it allows the researcher an opportunity to substantiate the predicaments between rule and tool, gaining an entry into empirically validating the theoretical framework for their use in their own studies.

An important part of the organizing process was identifying systemic relations within the Activity Theory elements through the methodical mapping of the codes. Under the Tools section of the analysis, the “app navigation struggles” codes were mapped, giving the researcher proof that children had trouble navigating *Preschool Treasure* when it was being used for educational purposes. When the researchers examined the code for aligning learning objectives using rules, they found evidence of differences between the expectations of institutional policy (rules) and the features or output of the application. As a result, the code was given the status of a rule. Since communications between the teacher and the parent or parents influenced the application's implementation in some ways, the coding of parent-teacher communications

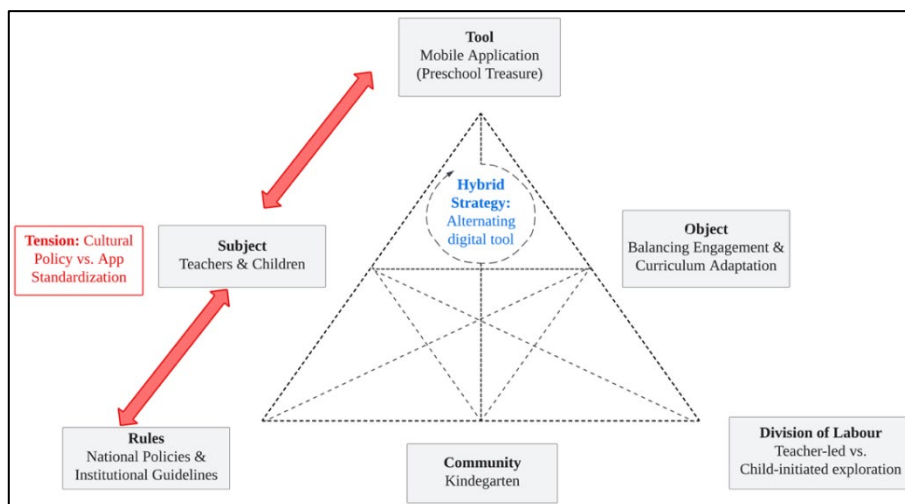
regarding its use was categorized under the community mapping dimension. During the division of labor analysis, teachers observed that when using *Preschool Treasure*, they modified their duties or teaching roles because the children served as guides while the teachers aided. In the end, the researcher discovered first contradictions between the app's features and teachers, followed by secondary contradictions between the app's features and curriculum requirements, such as the intended learning content or degree of difficulty, as they proceeded through the software development and mapping process.

The assessment of the documentation demonstrated the tense relationship between the actual technological implementation in digital transformation initiatives and the institutions that make claims. Progressive policy narratives provided new approaches for reforms, but their actual implementation faced restrictions from the philosophical approach used to create tool systems. The quantifiable data showed that the average time children spent using *Preschool Treasure* (28 minutes) ruled shorter than non-digital tool engagement (37 minutes) within the single pilot kindergarten thus revealing a direct contradiction between planned flexibility and tool-based limitations. These findings advocate for a policy-design-practice feedback loop, integrating teacher agency most of participants emphasized the need for co-design rights into technological governance to advance sustainable digital ecosystems in early education.

To systematically visualize these tensions and their mediation mechanisms, the Activity Theory diagram (Figure 4) conceptualizes the integration of *Preschool Treasure* within the preschool classroom as a dynamic system comprising six interconnected nodes: subjects (teachers and children), tools (the mobile application), object (balancing engagement and curriculum adaptation), rules (national policies and institutional guidelines), community (teachers, children, and developers), and division of labor (teacher-led instruction and child-initiated exploration). Arrows denote mediational relationships, with red highlights marking primary contradictions. For instance, the rule-tool contradiction manifests as policy mandates for culturally responsive pedagogy (Ministry of Education of the People's Republic of China, 2022) conflicting with the app's standardized design, which restricts localized content customization. This tension is partially mediated by teachers' hybrid strategies, such as alternating between digital and physical tools during observed sessions. The adaptive practices serve as implementations of the previous described feedback loop which demonstrates how teaching capabilities alter the ways policy guidelines are executed and affect tool effectiveness.

**Figure 4**

*Activity Theory of "Preschool Treasure" Integration with Contradictions and Mediations*



The described framework serves to interpret upcoming empirical data while identifying intervention methods that address broken systems. The theoretical framework of the diagram receives support through data collected from interviews and observations and analysis of policy documents. All surveyed teachers except one expressed expressed frustration regarding the application's lack of relevance to their specific educational context. The teacher expressed their inability to implement abacus aspects into math sections

of the platform similarly to “rule-tool contradiction” defined by the model. Teachers utilized a mediation strategy by deactivating app characteristics that were irrelevant to their curriculum needs to maintain educational focus in their classrooms. The diagram reflects the findings from Gravel (2020) that systemic contradictions generate new pedagogical approaches by demonstrating the integration of digital and physical tasks.

### Discussion

Within the framework of Activity Theory, systemic contradictions served as a driving force behind the development of adaptive integration strategies, rather than simply presenting barriers. The following examples illustrate this point. The first example of a secondary contradiction you applied is the contradiction between the Tool and Object, where the animations from the app (Tool) that were supposed to be engaging to students, instead drew attention away from curriculum-aligned activities such as number sequencing (Object). As a result of this misalignment, teachers found themselves needing to incorporate a hybrid method of the delivery of instruction. The second example you provided of a Rule-Tool contradiction was between the national policy requiring that teachers implement what is termed as, “culturally responsive pedagogy” (Rule) versus the app being designed in a standardized format (Tool). Therefore, teachers were forced to supplement the app with cultural activities such as creating decorations for Chinese New Year. The last contradiction presented is the Community-Tool contradiction between the need of teachers to have a localized version of the app, and the need for developers to provide an app that offers scalability. This conflict led the grassroots community to support a model of co-design and created the necessary momentum for innovation as all stakeholders developed strategies for integrating the curriculum and app with their own unique context.

The Preschool Treasure app’s engaging animations (Tool) often distracted students from curriculum-aligned tasks (Object), such as number sequencing. This mismatch led teachers to adopt hybrid practices. The second, Rule-Tool Contradictions. The app’s strict, standardized design (Tool) ran counter to national policies that promoted “culturally responsive pedagogy” (Rule). Teachers addressed this by adding offline cultural activities (like making Chinese New Year decorations) to the app content. Then, in Community-Tool Contradictions, teachers demanded localized customization while developers prioritized scalability. This conflict sparked grassroots support for co-design models in which teachers participate in the creation of apps. Contradictions presented chances for innovation rather than obstacles, encouraging stakeholders to create context-sensitive integration strategies.

Through the examination of the relationship between the design of applications and their connection to curriculum, several key themes were identified. Modularity played a large role in this relationship because apps that had customizable features allowed teachers to align the use of the app to their specific curriculum objectives by changing storylines and difficulty levels, for example, adding common tools to a math game (abacus beads) helped build an app’s connection to a teacher’s curriculum. Teachers were also able to take advantage of the importance of including the culture in the design of the app. For instance, when the app represented the local culture (i.e., demonstrating urban family life or referencing local festivals) it resonated with students (resulting in a deeper connectivity), thus capturing and retaining the students’ interest. Lastly, the purpose of the user interfaces needed to be as simple and intuitive as possible to reduce cognitive overload on the user. Overly complex designs led to children’s superficial interactions (e.g., randomly clicking on animated objects), which led to increased distractions from the app’s educational outcomes. Therefore, in order to support the curriculum’s goals, the design of the application needed to focus on the user and, therefore, provide a balance between interactivity, flexibility, and the importance of cultural recognition.

The results further provided three primary strategies teachers could leverage to mitigate the conflict between emergent, technology-mediated engagement and the traditional curriculum delivery. The first strategy was “temporal hybridity.” This is the intentional planning of activities in order to transition between the more exploratory facets of app-mediated learning (e.g., interactive storytelling) and the more traditional tasks associated with a curriculum (e.g., phonics via textbook). The second strategy was

“pedagogical bridging.” Apps were often used to provide a “bridge” between learning segments or as a form of motivational reward (i.e., completing a worksheet before engaging in an educational game). The third and final strategy that teachers displayed was “critical improvisation.” Teachers were often able to modify or circumvent the restrictions of the app by integrating culturally appropriate content into the app, such as telling the story in the app using regional dialects, or disabling certain features that were not aligned with their instructional objectives.

These strategies demonstrate how important it is for teachers to have agency and be able to adapt, while also ensuring that school districts continue to create an environment where all educators receive systemic support. Teacher agency and adaptability require ongoing systemic support through targeted professional development opportunities and by providing teachers with co-design rights in educational technology development to implement and sustain scalable best practices.

### **Teachers' Perceptions of the App's Usability and Alignment with Curriculum Goals**

While *Preschool Treasure* is seen by the teachers as an engaging tool for students, there are challenges associated with defining the explicit curriculum objectives through its use. As Teacher C states, “*Preschool Treasure's* interactive, story and game-based elements engage a children's attention.” It is challenging for Teacher C to relate the educational activities conducted via *Preschool Treasure* to the targets outlined in the curriculum. The AT framework features this fundamental contradiction between student engagement and curriculum requirements since the educational app functions as the mediation tool that links teaching staff with learning targets although it fails to completely resolve the conflict between disruptive educational methods and established curriculum standards (Engeström, 2014).

Research by Alam and Mohanty (2023) mirrors the difficulties teachers encounter when trying to merge digital resources with rigid educational structures particularly in educational systems strong with established traditional teaching practices. The Ministry of Education of the People's Republic of China (2019) specifies that digital tools should support traditional educational practices without replacing them as both methods must keep fidelity to each other.

### **Student Engagement and Interactive Learning**

The observations showed the app led to higher student involvement caused by its interactive parts. The app prompted better participation between students in storytelling activities compared to regular language instruction techniques. The student passionately stated,

I really enjoy the app stories since I can interact with characters through touch to control their movements.

The educational app demonstrates fundamental aspects of AT because it uses interactive features to create a process-based bonding between students and learning outcomes (Chung et al., 2019; Griffith et al., 2020).

The teachers questioned if students spent too much time using the app because they believed this might reduce their physical learning opportunities and social interactions. The app delivers effective engagement yet teachers need to establish opportunities for direct physical learning along with face-to-face student interactions according to Teacher B. Current research (Işikoğlu et al., 2023; Poquet & De Laat, 2021). combines with this discovery to warn about digital tool excess in early childhood education as it threatens whole child development.

### **Challenges in Balancing Digital and Traditional Methods**

Most interviews along with observation data pointed towards the difficulty experienced by teachers while combining digital tools with their established teaching procedures. Please note that the educational application enabled creative approaches to student engagement although its usage sometimes generated conflicts with the established Chinese kindergarten curriculum. The app extends a wide range of possibilities yet Teacher D noted that their curriculum exists with strict requirements about what topics must be taught and when. Limiting educational tools to traditional methods alongside modern approaches is a difficult task to achieve. The tension emerges from the analysis of contradictions between rules of

curriculum requirements and the using tools of the app according to Kessler (2020).

Digital tools have a specific purpose according to early childhood education guidelines from the Ministry of Education of the People's Republic of China (2023) which notes that these tools should serve to complement traditional teaching approaches. Specifically, this policy supports teachers' views by demonstrating the requirement of framework changes to effectively merge digital learning tools with traditional educational systems.

### **Professional Development and Systemic Support**

Teacher A explained that effective use of the app depends heavily on professional development focused on skill development for curriculum alignment and classroom management. The AT concept of community and division of labor emphasizes that tool implementation success requires involvement and collaboration of all stakeholders (Bower, 2019).

Modern scientific research demonstrates failure to provide adequate support for teacher training leads to difficulties implementing digital tools (Akram et al., 2022; Amhag et al., 2019). The Ministry of Education of the People's Republic of China (2022) supports improved digital infrastructure alongside teacher training programs while addressing the rising awareness of this necessity in the country.

### **Cultural and Contextual Considerations**

The research demonstrated that cultural elements together with contextual factors determined how the app would be implemented. Teachers highlighted that the application developers made it for young learners, yet some features failed to suit Chinese kindergarten educational practices and cultural expectations. The app faces challenges because student backgrounds lack familiarity with many of the characters and stories presented according to Teacher E. Research (Brown et al., 2019) supports the essential requirement to incorporate culture-based design into education technology which makes this discovery significant.

From an AT perspective, this issue reflects the influence of cultural-historical factors on the activity system, where tools must be adapted to fit the specific context in which they are used (Grimalt-Álvaro & Ametller, 2021). Preschool Treasure serves as a mediating tool that shapes the relationship between the teacher and the students' learning objectives. The app's success lies in its ability to engage students interactively while supporting teachers in meeting curriculum standards, aligning with AT's emphasis on tools as mediators that must fulfil both motivational and educational needs within the classroom.

Using a previous example (Figure 4) to help visualize some systemic contradictions that impact implementation will help to provide a better understanding of the evolution of the teachers' adaptive strategies that led to the development of the re-mediated activity system as shown in Figure 5. In this newer version, the previously identified tensions have been resolved. For instance, the Tools component of the system has evolved from the original mobile application to now include a new "Hybrid Tool Kit" consisting of both mobile and offline materials. Furthermore, the Rules component has also been redefined to allow teachers more local flexibility. The new graphical depiction of the activity system represents how the system has moved from being one that is contradictory towards becoming a sustainable model for integrated teaching and learning.



collective pedagogical framework found in Chinese kindergartens. Consequently, the prescribed local curriculum often sits in opposition to the rigid, individualized design of digital tools. Users struggled with ineffective interfaces and a lack of culturally appropriate content, supporting An and Oliver's (2021) contention that educational technology must be consistent with regionally specific cultural phenomena to be effective.

The findings of this study affirm the existence of an emerging consensus in Activity Theory about the importance of flexibility in integrating technology into classroom instruction, specifically positioning flexibility in terms of the cultural-contextual factors that aid in mediating these systemic changes. While the foundational framework established by Engeström (2014) relies on the notion that contradictions create the tension necessary for driving change; nevertheless, many recent studies assert that explicitly integrating cultural resources into this framework is critical in mediating these systemic changes (Von Fircks, 2024). This study supports this idea. As a result of resolving the rule-tool contradictions, the teachers involved not only implemented technical solutions, but also developed hybrid pedagogical practices. Specifically, the teachers were able to combine elements of physical and digital play in their approach to instructional practices. This finding dovetails with the emerging trend of looking at how digital learning is impacted by cultural differences and strengthens the argument for broadening the definition of Activity Theory to include the adaptability of Activity Systems to the local culture (Yang & Li, 2019).

The findings of this study suggest that educational technology development is moving toward what is now referred to as a "glocalized" approach, one that aligns the fast-moving global technological landscape with the individualized, localized needs of educators. In order to achieve this alignment, it is imperative for developers of Educational Technology to develop modular applications (meaning the app can contain multiple modules representing similar or equivalently educational contexts) that allow educators to customize the content based on their specific context. Additionally, to facilitate feedback on the effectiveness of the application, policymakers should create a robust, organized mechanism to allow the creation and implementation of feedback between educators and Educational Technology developers.

Hence, engagement with the application under evaluation should not solely be an indicator of "success or failure"; rather, it should be understood as a process by which educators provide students with an authentic learning experience. Authentic learning experiences are achieved only through a collaborative design process where digital tools create authentic experiences which effectively meet the particular curriculum and cultural needs of a particular kindergarten.

In addition, applying an Activity Theory perspective to this study enables one to move beyond the notion of binary evaluation of success or failure in relation to technology integration. Through Activity Theory's emphasis on the relationship between Subject (teacher) and Object (student development), one is able to understand how the introduction of technology from the *Preschool Treasure* application acted as a stimulus for systemic change rather than just an additive measure. Hence, Activity Theory reinforces that the value of digital tools does not derive from their additional functions but rather from their ability to create 'expansive learning' within school systems. The findings of this research suggest that when the contradictions inherent within systems are made visible and are addressed collectively, they can be reframed from barriers to the development of innovative pedagogical practices and cultural renewal.

### **Contributions and Limitations**

The research analysis of digital tool integration in Chinese kindergartens utilizes Activity Theory as it introduces fresh insights about this process from non-Western settings. This research shows how cultural elements along with contextual features produce enhanced app effectiveness in education yet this essential factor. The research synthesizes these insights into a framework for "glocalized" educational technology that balances global digital trends with local collectivist values. Practically, the study advocates for "co-design" policies that bridge national guidelines with classroom reality. It recommends that developers prioritize modular, customizable templates; policymakers establish structured feedback loops; and educators pursue professional development in critical digital pedagogy. Ultimately, this approach ensures digital tools are not just technically sound, but culturally responsive and curricularly aligned. The findings

presented in this study were derived from a limited qualitative case study of only one mobile application and six educators working in the same school, therefore the findings should be considered as analytical generalizations rather than as statistical generalizations. The narrow scope of this case study did allow for an in-depth view of two major “Rule-Tool” tensions, and future studies should be conducted to provide insight into the possibility of sustaining hybrid pedagogical practices over the long-term.

## Declarations

### *Authors’ Declarations*

**Acknowledgements:** Not applicable.

**Authors’ contributions:** Author Yufan Zhang wrote the original manuscript. Author Dr. Nurul Nadwa Zulkifli, and Author Prof. Ahmad Fauzi Mohd Ayub and Dr. Nur Raihan Che Nawi contributed to the revision and review process. All authors have read and approved the final manuscript.

**Competing interests:** The authors declare that they have no competing interests.

**Funding:** Not applicable.

**Ethics approval and consent to participate:** Ethical approval was obtained from the Ethics Committee for Research Involving Human Subjects (JKEUPM), reference no: JKEUPM-2023-1181. All interviews with adults were conducted with the consent of the participants, and observations of minors were undertaken with the consent of their guardians.

### *Publisher’s Declarations*

**Editorial Acknowledgement:** The editorial process of this article was completed under the editorship of Dr. Eleonora Teszenyi through a double-blind peer review with external reviewers.

**Publisher’s Note:** Journal of Childhood, Education & Society remains neutral with regard to jurisdictional claims in published maps and institutional affiliation.

## References

- Akram, H., Abdelrady, A. H., Al-Adwan, A. S., & Ramzan, M. (2022). Teachers’ perceptions of technology integration in teaching-learning practices: A systematic review. *Frontiers in Psychology, 13*, 920317. <https://doi.org/10.3389/fpsyg.2022.920317>
- Alam, A., & Mohanty, A. (2023). Educational technology: Exploring the convergence of technology and pedagogy through mobility, interactivity, AI, and learning tools. *Cogent Engineering, 10*(2), 2283282. <https://doi.org/10.1080/23311916.2023.2283282>
- Al Hashlamoun, N. (2021). Cultural challenges eLearners from the GCC countries face when enrolled in Western educational institutions: A thematic literature review. *Education and Information Technologies, 26*(2), 1409-1422. <https://doi.org/10.1007/s10639-020-10313-1>
- Amhag, L., Hellström, L., & Stigmar, M. (2019). Teacher educators’ use of digital tools and needs for digital competence in higher education. *Journal of Digital Learning in Teacher Education, 35*(4), 203–220. <https://doi.org/10.1080/21532974.2019.1646169>
- An, T., & Oliver, M. (2021). What in the world is educational technology? Rethinking the field from the perspective of the philosophy of technology. *Learning, Media and Technology, 46*(1), 6–19. <https://doi.org/10.1080/17439884.2020.1810066>
- Bell, C. A., Dobbelaer, M. J., Klette, K., & Visscher, A. (2019). Qualities of classroom observation systems. *School Effectiveness and School Improvement, 30*(1), 3–29. <https://doi.org/10.1080/09243453.2018.1539014>
- Blayone, T. J. B. (2019). Theorising effective uses of digital technology with activity theory. *Technology, Pedagogy and Education, 28*(4), 447–462. <https://doi.org/10.1080/1475939X.2019.1645728>
- Bower, M. (2019). Technology-mediated learning theory. *British Journal of Educational Technology, 50*(3), 1035–1048. <https://doi.org/10.1111/bjet.12771>
- Braun, V., & Clarke, V. (2023). Thematic analysis. In F. Maggino (Ed.), *Encyclopedia of quality of life and well-being research* (pp. 7187–7193). Springer. [https://doi.org/10.1007/978-3-031-17299-1\\_3470](https://doi.org/10.1007/978-3-031-17299-1_3470)
- Brown, B. A., Boda, P., Lemmi, C., & Monroe, X. (2019). Moving culturally relevant pedagogy from theory to practice: Exploring teachers’ application of culturally relevant education in science and mathematics. *Urban Education, 54*(6), 775–803. <https://doi.org/10.1177/0042085918794802>
- Burner, T., & Svendsen, B. (2020). Activity theory—Lev Vygotsky, Aleksei Leont’ev, Yrjö Engeström. In B. Akpan & T. J. Kennedy (Eds.), *Science education in theory and practice* (pp. 311–322). Springer. [https://doi.org/10.1007/978-3-030-43620-9\\_21](https://doi.org/10.1007/978-3-030-43620-9_21)
- Cong-Lem, N. (2022). Vygotsky’s, Leontiev’s and Engeström’s cultural-historical (activity) theories: Overview, clarifications and implications. *Integrative Psychological and Behavioral Science, 56*(4), 1091-1112. <https://doi.org/10.1007/s12124-022-09703-6>

- Chung, C., Hwang, G., & Lai, C. (2019). A review of experimental mobile learning research in 2010–2016 based on the activity theory framework. *Computers & Education*, 129, 1–13. <https://doi.org/10.1016/j.compedu.2018.10.010>
- Creswell, J. W., & Poth, C. N. (2016). *Qualitative inquiry and research design: Choosing among five approaches*. Sage.
- Cypress, B. S. (2017). Rigor or reliability and validity in qualitative research: Perspectives, strategies, reconceptualization, and recommendations. *Dimensions of Critical Care Nursing*, 36(4), 253–263. <https://doi.org/10.1097/DCC.0000000000000253>
- Dias, M. J. A., Almodóvar, M., Atilas, J. T., Vargas, A. C., & Zúñiga León, I. M. (2020). Rising to the challenge: Innovative early childhood teachers adapt to the COVID-19 era. *Childhood Education*, 96(6), 38–45. <https://doi.org/10.1080/00094056.2020.1846385>
- Engeström, Y. (2014). Activity theory and learning at work. In U. Deinet & C. Reutlinger (Eds.), *Tätigkeit—aneignung—bildung* (pp. 67–96). Springer. [https://doi.org/10.1007/978-3-658-02120-7\\_3](https://doi.org/10.1007/978-3-658-02120-7_3)
- Engeström, Y. (2020). Concept formation in the wild: Towards a research agenda. *Education et Didactique*, 2, 99–113. <https://doi.org/10.4000/educationdidactique.6816>
- Ford, T. G., Kwon, K. A., & Tsotsoros, J. D. (2021). Early childhood distance learning in the U.S. during the COVID pandemic: Challenges and opportunities. *Children and Youth Services Review*, 131, 106297. <https://doi.org/10.1016/j.childyouth.2021.106297>
- Granić, A., & Marangunić, N. (2019). Technology acceptance model in educational context: A systematic literature review. *British Journal of Educational Technology*, 50(5), 2572–2593. <https://doi.org/10.1111/bjet.12864>
- Gravell, J. D. (2020). *Learning to teach with technology: Interest convergence, identity, and designing for novice teacher critical technology literacy* [Unpublished doctoral dissertation]. University of California.
- Griffith, S. F., Hagan, M. B., Heymann, P., Heflin, B. H., & Bagner, D. M. (2020). Apps as learning tools: A systematic review. *Pediatrics*, 145(1), e20191579. <https://doi.org/10.1542/peds.2019-1579>
- Grimalt-Álvaro, C., & Ametller, J. (2021). A cultural-historical activity theory approach for the design of a qualitative methodology in science educational research. *International Journal of Qualitative Methods*, 20, 1-12. <https://doi.org/10.1177/16094069211060664>
- Grimus, M. (2020). Emerging technologies: Impacting learning, pedagogy and curriculum development. In S. Yu, M. Ally, & A. Tsinakos (Eds.), *Emerging technologies and pedagogies in the curriculum* (pp. 127–151). Springer. [https://doi.org/10.1007/978-981-15-0618-5\\_8](https://doi.org/10.1007/978-981-15-0618-5_8)
- Hamilton, D., McKechnie, J., Edgerton, E., & Wilson, C. (2021). Immersive virtual reality as a pedagogical tool in education: A systematic literature review of quantitative learning outcomes and experimental design. *Journal of Computers in Education*, 8(1), 1–32. <https://doi.org/10.1007/s40692-020-00169-2>
- Hatzigianni, M., Stephenson, T., Harrison, L. J., Waniganayake, M., Li, P., Barblett, L., Hadley, F., Andrews, R., Davis, B., & Irvine, S. (2023). The role of digital technologies in supporting quality improvement in Australian early childhood education and care settings. *International Journal of Child Care and Education Policy*, 17(1), 5. <https://doi.org/10.1186/s40723-023-00107-6>
- Holland, D., & Lave, J. (2019). Social practice theory and the historical production of persons. In A. Edwards, M. Flear, & L. Böttcher (Eds.), *Cultural-historical approaches to studying learning and development* (Vol. 6, pp. 235–248). Springer. [https://doi.org/10.1007/978-981-13-6826-4\\_15](https://doi.org/10.1007/978-981-13-6826-4_15)
- Hopwood, N. (2022). Agency in cultural-historical activity theory: Strengthening commitment to social transformation. *Mind, Culture, and Activity*, 29(2), 108–122. <https://doi.org/10.1080/10749039.2022.2092151>
- Huang, R., Yang, W., & Li, H. (2019). On the road to participatory pedagogy: A mixed-methods study of pedagogical interaction in Chinese kindergartens. *Teaching and Teacher Education*, 85, 81–91. <https://doi.org/10.1016/j.tate.2019.06.009>
- Işıkoğlu, N., Erol, A., Atan, A., & Aytengin, S. (2023). A qualitative case study about overuse of digital play at home. *Current Psychology*, 42(3), 1676–1686. <https://doi.org/10.1007/s12144-021-01442-y>
- Kessler, M. (2020). Technology-mediated writing: Exploring incoming graduate students' L2 writing strategies with Activity Theory. *Computers and Composition*, 55, 102542. <https://doi.org/10.1016/j.compcop.2020.102542>
- Khasanah, U., Asry, W., & Latifah, N. (2023). Improving early childhood language development through “kiki miu-miu” youtube videos. *Journal of Childhood Development*, 3(2), 24–35. <https://doi.org/10.25217/jcd.v3i2.3780>
- Liaw, S.-S., Hatala, M., & Huang, H.-M. (2010). Investigating acceptance toward mobile learning to assist individual knowledge management: Based on activity theory approach. *Computers & Education*, 54(2), 446–454. <https://doi.org/10.1016/j.compedu.2009.08.029>
- Mertala, P. (2019). Digital technologies in early childhood education – a frame analysis of preservice teachers' perceptions. *Early Child Development and Care*, 189(8), 1228–1241. <https://doi.org/10.1080/03004430.2017.1372756>
- Ministry of Education of the People's Republic of China. (2019). *Opinion on implementing the national primary and secondary school teachers' information technology application ability enhancement project 2.0*. [http://www.moe.gov.cn/srcsite/A10/s7034/201904/t20190402\\_376493.html](http://www.moe.gov.cn/srcsite/A10/s7034/201904/t20190402_376493.html)

- Ministry of Education of the People's Republic of China. (2022). *Notice on issuing the educational industry standard 'basic classification codes for digital educational resources'*. [http://www.moe.gov.cn/srcsite/A16/s3342/202302/t20230214\\_1044628.html](http://www.moe.gov.cn/srcsite/A16/s3342/202302/t20230214_1044628.html)
- Ministry of Education of the People's Republic of China. (2024). *Notice on strengthening artificial intelligence education in primary and secondary schools*. [http://www.moe.gov.cn/jyb\\_xwfb/gzdt\\_gzdt/s5987/202412/t20241202\\_1165500.html](http://www.moe.gov.cn/jyb_xwfb/gzdt_gzdt/s5987/202412/t20241202_1165500.html)
- Ministry of Education of the People's Republic of China. (2025). *Opinions of the ministry of education and other nine departments on accelerating the digitalisation of education* [http://www.moe.gov.cn/srcsite/A01/s7048/202504/t20250416\\_1187476.html](http://www.moe.gov.cn/srcsite/A01/s7048/202504/t20250416_1187476.html)
- Morgan, H. (2022). Conducting a qualitative document analysis. *The Qualitative Report*, 27(1), 64–77. <https://doi.org/10.46743/2160-3715/2022.5044>
- Núñez, D. (2023). *A descriptive qualitative study exploring middle-school teachers' perceptions of professional development on technology integration* [Doctoral dissertation, Abilene Christian University]. Digital Commons @ ACU. <https://digitalcommons.acu.edu/etd/547/>
- Palaiologou, I. (2020). Teachers' dispositions towards the role of digital devices in play-based pedagogy in early childhood education. In I. Palaiologou (Ed.), *Digital play and technologies in the early years* (pp. 83-99). Routledge. <https://doi.org/10.4324/9780429444418>
- Parker, R., & Thomsen, B. S. (2019). *Learning through play at school: A study of playful integrated pedagogies that foster children's holistic skills development in the primary school classroom*. The LEGO Foundation. [https://research.acer.edu.au/learning\\_processes/22](https://research.acer.edu.au/learning_processes/22)
- Pettersson, F. (2021). Understanding digitalization and educational change in school by means of activity theory and the levels of learning concept. *Education and Information Technologies*, 26(1), 187-204. <https://doi.org/10.1007/s10639-020-10239-8>
- Poquet, O., & De Laat, M. (2021). Developing capabilities: Lifelong learning in the age of AI. *British Journal of Educational Technology*, 52(4), 1695–1708. <https://doi.org/10.1111/bjet.13123>
- Ruslin, R., Mashuri, S., Rasak, M. S. A., Alhabsyi, F., & Syam, H. (2022). Semi-structured Interview: A methodological reflection on the development of a qualitative research instrument in educational studies. *IOSR Journal of Research & Method in Education*, 12(1), 22–29.
- Sannino, A., & Engeström, Y. (2018). Cultural-historical activity theory: Founding insights and new challenges. *Cultural-Historical Psychology*, 14(3), 43-56. <https://doi.org/10.17759/chp.2018140304>
- Scherer, R., Siddiq, F., & Tondeur, J. (2019). The technology acceptance model (TAM): A meta-analytic structural equation modeling approach to explaining teachers' adoption of digital technology in education. *Computers & Education*, 128, 13–35. <https://doi.org/10.1016/j.compedu.2018.09.009>
- Schmidt, M., & Tawfik, A. A. (2022). Activity theory as a lens for developing and applying personas and scenarios in learning experience design. *The Journal of Applied Instructional Design*, 11(1), 55-73. <https://doi.org/10.51869/111/msat>
- Teräs, M., Suoranta, J., Teräs, H., & Curcher, M. (2020). Post-covid-19 education and education technology 'solutionism': A seller's market. *Postdigital Science and Education*, 2(3), 863-878. <https://doi.org/10.1007/s42438-020-00164-x>
- Undheim, M. (2022). Children and teachers engaging together with digital technology in early childhood education and care institutions: A literature review. *European Early Childhood Education Research Journal*, 30(3), 472-489. <https://doi.org/10.1080/1350293X.2021.1971730>
- Von Fircks, E. (2024). Interdependence and cultural resources to mediate change: What was missing in Engeström's third generational activity theory. *Human Arenas*, 7(4), 931–943. <https://doi.org/10.1007/s42087-022-00303-9>
- Weng, J., & Li, H. (2020). Early childhood technology education in China: A case study of Shanghai. *Early Child Development and Care*, 192(4), 589-605. <https://doi.org/10.1080/03004430.2018.1542383>
- Yan, C., & Wang, L. (2022). Experienced EFL teachers switching to online teaching: A case study from China. *System*, 105, 102717. <https://doi.org/10.1016/j.system.2021.102717>
- Yang, T., & Dong, C. (2024). What influences teachers' implementation of ICT in early childhood education? A qualitative exploration based on an ecological-TPACK framework. *Computers and Education Open*, 7, 100228. <https://doi.org/10.1016/j.caeo.2024.100228>
- Yang, W., & Li, H. (2019). Changing culture, changing curriculum: A case study of early childhood curriculum innovations in two Chinese kindergartens. *The Curriculum Journal*, 30(3), 279–297. <https://doi.org/10.1080/09585176.2019.1568269>
- Zhou, W., & Yang, W. (2025). Integrating story-based STEM design challenges in early childhood curricula: An activity theory perspective. *International Journal of Technology and Design Education*, 35, 483–506. <https://doi.org/10.1007/s10798-024-09917-2>

# Understanding childhood weight bias: Laying the foundation for promoting positive body image

Tingting Xu<sup>1</sup>, Yuan He<sup>2</sup>, Sarah Savoy<sup>3</sup>

**Abstract:** This study interviewed 131 kindergarten children in China regarding their perspectives on body size-related bias and associated behavioral tendencies using a case study design. Results showed that body satisfaction was prevalent among this group of young children. Similar to studies conducted in Western cultures targeting young children, body weight bias was evident among this group of Chinese kindergarteners with a strong preference for thinner body types, regardless of their genders. Qualitative findings indicated that weight bias could influence children's behaviors, with a tendency to select friends who either share similar body sizes or have slimmer body types. Meanwhile, children with higher body weight may be perceived as a "protector" prototype, a distinctive discovery and contribution to current literature. Findings also suggested a significant peer influence on body size perception, with family members also playing a role. However, the absence of media influence in the current study highlights the need to reconsider the tripartite model's applicability in non-Western cultural contexts and distinct age groups, offering a unique contribution to the body image literature with young children.

## Article History

Received: 30 June 2025

Accepted: 19 January 2026

## Keywords

Weight bias; Body image;

Early childhood; Cultural

context; The tripartite model

## Introduction

### Weight Bias and Body Satisfaction

Weight bias refers to negative attitudes, beliefs, stereotypes, and discrimination toward individuals based on their body size or weight (Puhl & Latner, 2007). It has been observed across various groups and age ranges, including both adults (Carels et al., 2009) and children (Damiano et al., 2015; Pont et al., 2017; Spiel et al., 2012). Weight bias leads people to associate negative attributes with individuals with higher body weight and positive attributes with individuals with lower body weight, stemming from the misconception that body weight can be easily controlled through dieting and physical exercise (Schousboe et al., 2004).

In reality, body weight is not easily malleable and is influenced by multiple factors, including genetics, environment, and societal influences (Blüher, 2019). Therefore, simply eating less and exercising more may not significantly alter body weight. However, such messages have been repeatedly conveyed to young children through various campaigns aimed at combating childhood obesity, such as Let's Move (ObamaWhiteHouse, 2017) in the U.S., Better Health (Department of Health & Social Care, 2022) in the United Kingdom, and World Obesity Day by the World Health Organization (2024). These messages have been internalized, as children tend to believe that body weight is entirely under one's self-control or entirely dependent on willpower (Tiggemann & Anesbury, 2000; Xu & He, 2022; Xu & Nerren, 2017).

Weight bias is deeply rooted in these misconceptions (Blüher, 2019) and has become prevalent not only among adolescents (Himmelstein & Puhl, 2019; Puhl & Luedicke, 2012) but also among young children (Harriger et al., 2019; Spiel et al., 2012). A comparison of the findings of Richardson et al. (1961) and Latner

<sup>1</sup> Stephen F. Austin State University, Faculty, Department of Education Studies, Nacogdoches, Texas, United States, e-mail: [xut@sfasu.edu](mailto:xut@sfasu.edu), ORCID: <https://orcid.org/0000-0003-2939-769X>

<sup>2</sup> Stephen F. Austin State University, Faculty, Department of Education Studies, Nacogdoches, Texas, United States, e-mail: [hey2@sfasu.edu](mailto:hey2@sfasu.edu), ORCID: <https://orcid.org/0000-0001-9758-592X>

<sup>3</sup> Stephen F. Austin State University, Faculty, Department of Psychology, Nacogdoches, Texas, United States, e-mail: [savoysc@sfasu.edu](mailto:savoysc@sfasu.edu), ORCID: <https://orcid.org/0000-0003-4378-7950>

and Stunkard (2003) suggests that weight bias among children has increased by 40.8%. Evidence of weight bias has been observed in children as young as three years old (Brylinsky & Moore, 1994; Cramer & Steiwert, 1998; Harriger & Trammell, 2022; Worobey & Worobey, 2014). Specifically, preschool-aged children in these studies were found more likely to describe an overweight peer as mean, unhappy, having few friends, and being someone they were less likely to play with.

Weight bias is prevalent in school settings, where children and adolescents with heavier bodies frequently experience weight-related stigmatization and victimization (Puhl & King, 2013; van Geel et al., 2014). Weight bias can be internalized, known as internalized weight bias (IWB), meaning children and adolescents can apply negative weight bias to themselves (Pearl & Puhl, 2018). IWB refers to self-directed negative beliefs about oneself based on perceived weight status (Durso & Latner, 2008). As a result, this raises significant concerns among parents (Puhl et al., 2013), because these children who are experiencing weight-related victimization are more likely to have depression, low self-esteem, and poor academic performance (Puhl & Lessard, 2020). Although comparatively fewer studies have been conducted with very young children, there is evidence demonstrating that children who are victimized or rejected based on weight can internalize weight bias, and in turn develop negative attitudes toward themselves and their own bodies (Smolak, 2004; Spiel et al., 2012).

Gender differences in weight bias have been investigated in previous work, adolescent girls experience higher rates of weight-related victimization compared to adolescent boys (Puhl et al., 2017). However, studies targeting young children are limited, and findings are mixed (Puhl & Latner, 2007). Some evidence suggests that girls hold more negative biases related to weight than boys (Burmeister et al., 2016; Harriger et al., 2019; Latner & Stunkard, 2003; Spiel et al., 2012), others found the opposite with 4-year-old boys more likely to demonstrate weight bias than 4-year-old girls (Damiano et al., 2015), while some researchers found no gender differences in terms of weight bias (Harrison et al., 2016; Kornilaki, 2014).

Despite the weight bias related issues discussed above, there are some young children who are quite satisfied with their own body weight and size. This is particularly evident in kindergarten children in China (Xu & He, 2022). This result contrasts with findings in Western cultures that body dissatisfaction was evident in children between the ages of 5 and 8 years old (Lowes & Tiggemann, 2003; Schur et al., 2000; Tiggemann & Wilson-Barrett, 1998). A potential reason behind this discrepancy could be the cultural context, or the beliefs, values, and skills of specific cultural groups (Markus & Hamedani, 2020).

Across different cultural contexts, there is empirical evidence supporting cultural differences on body image ideals, body dissatisfaction, and weight bias. For example, Tiggemann (2012) identified body ideal exceptions in some Asian cultures where plumpness was valued and recognized as a traditional indicator of good health or beauty. In rural Fiji, maintaining a robust body size was important and being thin would be blamed and seen as something to be taken care of by the family (Baker, 2005). This devaluation of thinness may have been more common among non-Western, non-industrialized regions of the world (Anderson-Fye, 2011). However, body image ideals seem to have shifted with industrialization, not only in Asia (Kawamura, 2011) but also in Fiji (Baker, 2005), as a result, higher rates of eating disorders have been observed in parts of Fiji, Hong Kong, and Taiwan. The globalization of the economy opens the door for more exposure to western body images and ideals through media programming (Anderson-Fye, 2011). Even so, it is a promising notion that powerful cultural values could resist western ideals and serve as a buffer against weight bias and body dissatisfaction (Anderson-Fye, 2004). More studies are needed to investigate body image among children at this young age across different cultures, especially targeting younger children. Unfortunately, weight bias has rarely been examined in young children in Chinese culture. Particularly minimal work has explored gender differences on weight bias among Chinese children. To minimize this gap in the literature, this current study explored Chinese kindergarten children's weight bias to gain a more thorough understanding which may provide a foundation for intervention and/or prevention.

### **Conceptual Understanding of Body Image Development**

Body image is how a person perceives, thinks about, and feels regarding their physical appearance

(Heatherton, 2011). Body image-related concerns, attitudes, and behaviors often begin in childhood. Smolak (2011) emphasizes that early experiences significantly shape body image development. Flannery-Schroeder and Chrisler (1996) further note that children absorb the message that “fat is bad and thin is good” from families, teachers, peers, and the media—often internalizing this belief long before they reach adolescence (pp. 243–244). Given the documented health issues related to body image among young children, researchers must understand the factors influencing their body image development and weight bias is crucial. Such understanding can help prevent negative psychological outcomes and promote positive body image perceptions of themselves and others.

From a social-cognitive perspective, the Tripartite Influence Model (Thompson et al., 1999) posits that parents, peers, and media are the primary sociocultural resources shaping body image. Thompson et al. (1999) and van den Berg et al. (2002) suggest that these three influences significantly affect body image development and are strong predictors of weight-related behaviors. Although initially applied to research on body dissatisfaction and eating disorders (e.g., Smolak & Levin, 2001; Shomaker & Furman, 2009), this model offers valuable insights into understanding body image and weight bias development in young children.

Within the sociocultural context, evidence has demonstrated that both parents can impact a child’s body image development and attitudes (e.g., Ricciardelli & McCabe, 2001; Rodgers et al., 2009). Also supported by Vygotsky’s Sociocultural Theory (Vygotsky & Cole, 1978), cultural beliefs on body image ideals and weight bias can be transmitted from one generation to the next, from one person to the other. Parents may pass culturally-based weight-related stereotyped beliefs to their kids. For example, parents might make negatively stereotyped comments about obese individuals in front of their children, thus transmitting weight bias through verbal communications (Puhl & Latner, 2007). Rodgers and Chabrol’s (2009) recent review of 56 publications suggested that parents’ verbal communications seem to be most influential on adolescents’ body concerns; both mothers and fathers are important contributors to children’s development of weight bias. Though less is understood regarding preadolescent children, few studies found correlations between parents’ and their children’s body size attitudes (Holub et al., 2011; Rich et al., 2008; Perez et al., 2018; Spiel et al., 2012). Because children are more likely to learn weight biased attitudes and behaviors from their parents (Hutchinson & Calland, 2019), it is a topic that needs further exploration.

Peer influence cannot be overlooked within the social-cultural context, as peers play a significant role in shaping body image development (Smolak & Levine, 2001) and are recognized as the most common source of weight bias (Himmelstein & Puhl, 2019). Research has shown that conversations among peers about appearance, body shape, weight, and methods of losing weight or building muscle can contribute to body image concerns (e.g., Gondoli et al., 2011; Helfert & Warschburger, 2011; Holt & Ricciardelli, 2002). Weight-related teasing from peers is also associated with increased body dissatisfaction (Phares et al., 2004), and lower self-esteem with their appearance (Lunde et al., 2006).

Due to shared peer norms regarding thinness, the thin ideal has been observed among girls as young as 6 to 7 years old. Moreover, peers’ body dissatisfaction is often internalized as personal dissatisfaction (Dohnt & Tiggemann, 2005), further highlighting the impact of peer influence on body image. Ruble (1983) explained that social comparison becomes particularly apparent between kindergarten and second grade, when self-evaluation is shaped not only by environmental messages but also by social norms (Ruble et al., 1994). At this stage, children begin to recognize societal standards of thinness and compare their bodies to these ideals, often resulting in body dissatisfaction. These factors help explain young children’s early awareness of their own body size, the development of negative attitudes toward overweight peers, and the positive association between thinness and social popularity (Clark & Tiggemann, 2006; Jones & Crawford, 2005).

Many studies have documented media as important sociocultural factors influencing body image perceptions (Levine & Harrison, 2004; Smolak & Levine, 2001), with most studies highlighting its negative impact on children’s body image development. For example, television viewing was found associated with

boys' endorsement of stereotypes about overweight females (Harrison, 2000), while exposure to magazines was correlated with increased awareness of the thin ideal among children aged 9 to 12 (Sands & Wardle, 2003). Similarly, media exposure through magazines and TV programs has been tied to internalization of the thin ideal, body dissatisfaction, and stronger preferences for thinner body types in young girls (Harrison & Hefner, 2006). Even very young children appear susceptible to these influences; girls aged 5 to 8 reported lower satisfaction with their body and its appearance, and a stronger desire for thinness after viewing Barbie doll images (Dittmar et al., 2006). More recently, a study in South Korea found that girls aged 5 to 6 who were exposed to Korean pop music TV programs exhibited greater concern about weight and a heightened desire to be thinner (Kim & Han, 2021). These findings raise great concerns about the harmful effects of media exposure.

Given the multidimensional nature of body image and the influence of parents, peers, and media, it is challenging to develop a comprehensive understanding of body image, particularly in young children. Children's perspectives on body image are not shaped by any single influence in isolation; rather, parental, peer, and media influences interact within a cultural context, which provides the backdrop to form children's attitudes toward their own and others' body size. Body satisfaction, evaluation of one's own body, is just one component of body image. Therefore, the current study aimed to explore attitudes toward one's own and others' body size among kindergarten children in a Chinese cultural context. Specifically, we examined factors that might contribute to the development of body satisfaction and weight bias, and ways these biases might influence behavior. By challenging the applicability of the Tripartite Influence Model (Thompson et al., 1999) within a Chinese cultural context, we offer insights into the culturally specific factors shaping body image development in early childhood.

### **Method**

Little is known about whether weight bias exists in Chinese kindergarten children, and whether it is that similar to weight bias that is held by young children in Western culture. It is unclear whether Chinese girls and boys have different weight biases, what factors may influence their weight bias development, or how bias influences their behavior. To address these gaps, the current study explored children's voices regarding body size-related bias and its relationship to behavioral tendencies.

#### **Study Design**

The study employed a qualitative case study for data collection and analysis (Yin, 1994). This design was particularly suitable for the current research as it concentrated on a specific group of participants (kindergarten children), investigated a specific topic (body image perceptions and weight bias), and operated within a unique context (Chinese culture). Qualitative data in this study can provide deeper insights that enhance and extend the current understanding of the topic.

#### **Participants**

This study used a convenience sample with 131 children from a local kindergarten. This kindergarten is located in a city with a population of over one million in the middle eastern region of China; the socioeconomic status of the school district is considered middle class. Among these children, 59 were girls and 72 were boys; The youngest participant was 4 years and 8 months old, while the oldest was 7 years and 1 month old. The researchers first obtained ethical approval from the Institutional Review Board, then secured signed consent forms from the school director and parents before contacting the participants.

#### **Data Collection**

Data were mainly collected through semi-structured interviews. During the interview, there were three activities associated with the personal and ideal body size, the selections of playmates and best friend, and attribute assignments to facilitate data collection. These interview tasks have been used previously with preschool children (Harriger et al., 2010). Adapted from Collins (1991) and Cramer and Steinwert (1998), three different body figures in different body sizes (thinner, average, and larger) representing different weights were used to facilitate the interviews. These body figures looked the same, with the same

height and the same facial expression, except body sizes were different: One was thin, one was normal, and one was chubby. Two identical sets of boy figures were used for interviewing boys, including two thin-sized figures, two normal-sized figures, and two chubby-sized figures, a total of six. Two sets of girl figures were used for interviewing girls. There was no specific order to follow when using these figures.

Example questions related to personal and ideal body size were: *Are you happy with your body size? If I had a magic wand, which body size would you like to have?* Example question for playmates and best friend selections included: *Among these figures, which ones would you like to play with? Which one would be your best friend?* For attribute assignment, twelve adjectives for positively and negatively valenced attributes were presented on a cardstock and read to each child in a random order: happy, smart, nice, fun, has friends, does not get teased, sad, not smart, mean, not fun, has no friends, and gets teased (Harriger et al., 2010; Spiel et al., 2015; Worobey & Worobey, 2014). The researcher asked individual children: *Please point to the boy/girl that you think is/has\_\_\_\_\_.*

The participating children were individually interviewed in a quiet room assigned by the school principal. Before each interview, researchers shared information about the study, what they would be doing during the study, and asked about their willingness to participate in the study. Children were informed that they could stop and leave the interview whenever they wanted to. During the interview, the researcher asked questions one after another with minimal follow-up questions to clarify the children’s responses. Researchers documented interview questions and children’s verbal responses on paper and video recorded them for further transcription and verification purposes. Each interview lasted approximately 5-7 minutes.

### Data Analysis

The interview data were first transcribed and organized into an electronic document. Individual participants were assigned numbers. Data were analyzed following the three-step procedure by Miles and Huberman (1994). Researchers read the data line by line, color coded similar responses to create initial codes, and then organized similar data together based on frequencies to establish patterns. Matrices were then created for displaying the data with contrasts and comparisons to finalize themes (Miles & Huberman, 1994). See example codes, categories, and themes in Table 1. Interrater reliability (IR) was assessed to ensure agreement in data analyses (Miles & Huberman, 1994) and was calculated by randomly selecting 25% of the data and assigned to researchers to individually code them. The IR was calculated, yielding 92% agreement. Revisiting video files allowed for triangulation across multiple data sources using independent coding.

**Table 1**  
*Example Codes, Categories, and Themes*

Codes	Categories	Final Themes
- "he/she looks just like me." - "His body size is just like mine, therefore, I like him." - "His body size is the same as mine, we both have normal body size." - "Their body sizes are exactly same with mine, very pretty." - "She has the same weight as me, the same body shape."	-They look like me -Share the satisfying feeling about their own body size	Body Satisfaction
- "I like them because they are thin." - "I like the thin one; I don't like the big size." - "These are very slim and look very handsome." - "He is a little more handsome comparing to the others." - "He is the most handsome." - "She is thin, and we can play together very well." - "He is big, and nobody can fight him."	-Prefer the thin figures simply because they were thin. -Thin and/or normal figures were pretty and handsome. -The chubby figures would likely hurt them, because they were big.	Not the Chubby One
- "They are my friends." - "They look like my friends." - "QianYutong always comes to play with me." - "Feng Xinyu plays with me every day". - "My best friend is exactly the same with this one."	-Associate the figure(s) with their friends. -Personalize the figure by naming their friend. -Mention the activity they	Peer Influence

- "He played basketball with me before."	did with their friend.	
- "Mom says I am just right. My dad says I need to be a bit slimer."	-Family members' comments on their body size.	
- "My grandma says I need to grow a little bigger, but I think I am just right."	-The observations of their parents' behaviors/exercises associated with their body size.	Family Context
- "My mom is slim; she does exercise every day. At night, she does leg exercises and warm up exercises. But my dad is bigger than my mom, he does not exercise at all, he looks at his phone instead."		

## Results

### Body Satisfaction

Body satisfaction was found to be high in this group of children. When they were asked whether they were happy about their body size, among 131 children interviewed, approximately 96% of children ( $n = 126$ ) were highly satisfied while only 5 were not. This percentage was high compared to the findings in Western culture (Rand & Resnick, 2000). Seventy-four children insisted on maintaining their body size, even though they were told that they could change their body size. Fifty-one children said they would like to become thin, but six of them would like to become chubby(See Table 2).

**Table 2**  
*Ideal Body Size Selection Frequencies by Body Size and Gender*

	n	Thin	Normal	Chubby
Girls	59	29	28	2
Boys	72	22	46	4
Total Participants	131	51	74	6

Body satisfaction was also evident during the conversations asking about playmates and best friend selections. Children ( $n = 73, 55.7%$ ) frequently chose figures with the same body size as their own. Some children explained that "he/she looks just like me", including 20 boys and 9 girls. They consistently compared their body sizes to the figures selected, and they responded with full confidence, suggesting high body satisfaction among these children, regardless of their gender.

Most interestingly, more boys than girls were likely to share this satisfying feeling about their own body size. For example, Child88 picked normal-sized figure and said:

His body size is just like mine, therefore, I like him.

Child76 compared his body size to the best friend's and commented that

His body size is the same as mine, we both have normal body size.

Child62 only picked the normal-sized figures as her playmates and indicated that

Their body sizes are exactly the same with mine, very pretty.

The same responses were provided by Child61, who also chose the normal-sized figure as her best friend and said:

She has the same weight as me, the same body shape.

### Not the Chubby One

Despite self-body satisfaction being high among this group of children, they were more likely to select normal and thin figures rather than chubby figures to play with. This phenomenon suggested weight bias towards others and internalized social norms on thinness. As a best friend, 64 children selected the normal figures, 55 children selected the thin figures, and 11 children selected the chubby figures (see Table 3). Children who selected both thin and normal figures as best friends were excluded from the data analysis.

**Table 3**  
*Best Friend Selection Frequencies by Body Size and Gender*

	n	Thin	Normal	Chubby
Girls	58	31	24	3
Boys	72	24	40	8
Total Participants	130	55	64	11

Children's comments indicated they chose the average or the thin figures because either they look good or simply because they look like themselves. In other words, children in this group like to play with those who are good-looking or those who are similar to them in terms of body size. They also indicated that the chubby figures would likely hurt them, because they were big.

About one third of boys ( $n = 21$ ) and half of girls ( $n = 29$ ) clearly indicated that they liked thinner figures. When asked to explain their choices, they promptly stated that they preferred the thin figures simply because they were thin; they appeared more aware of the size. This response was common among boys and girls, with no significant differences found in the friend selection choices. In other words, this preference for thin figures was consistent across boys and girls. However, more girls than boys offered such explanations, despite 13 more boys participating in the study, indicating a stronger preference for the thin figures among participating girls.

In addition, boys in this group seemed to be more likely to be appearance-oriented, with more boys than girls offering the explanation that thin and/or normal figures were pretty and handsome. For example, Child49 said

These are very slim and look very handsome

while pointing at the thin- and normal-sized figures. Child104 also described the normal-sized figure as

He is a little more handsome comparing to the others; he is the most handsome.

It was very interesting to notice that more girls indicated a stronger preference for the thin-sized figures while more boys indicated their preference to a good-looking appearance. Based on current literature, there is hardly any study showing similar findings; it may be meaningful to examine children's perceptions of body size versus appearance.

### **Peer Influence**

Peers were often mentioned during children's conversations when they were asked about the reason why these figures were chosen for their playmates and/or their best friends. Children ( $n = 20$ , 15.3%) frequently mentioned that "they look like my friends" without any hesitation or delays. For instance, Child32, 41, 58, 63, 96, 110, 113, 123, and 126 all shared the same response, "They are my friends," after they chose their playmates. Child96 additionally explained that "They look like my friends".

In addition, children often mentioned their friends' names when they were asked to choose the best friend among the four playmates presented. For example, Child125 said

QianYutong always comes to play with me.

Similarly, Child113, who recognized the best friend figure and commented

Feng Xinyu, he plays with me every day.

Child114 justified

My best friend is exactly the same with this one.

Based on these responses, children's selection of playmates and/or their best friends showed great peer influence; children tend to play with the ones who were similar to their friends' body sizes.

## Family Context

Family members may be another influential factor in body size perception development among this group of children, as family members were often mentioned during interviews. Although the influence may not be as strong as peers, our qualitative data showed that family members including parents, grandparents, and siblings were mentioned by participating children, indicating their influences on body size perceptions and weight bias. For example, Child62 said,

Mom says I am just right. My dad says I need to be a bit slimer.

Child130 said

My grandma says I need to grow a little bigger, but I think I am just right.

Some children shared observations of their parents' exercise behaviors. Commented by Child125,

My mom is slim; she does exercise every day. At night, she does leg exercises and warm-up exercises. But my dad is bigger than my mom, he does not exercise at all, he looks at his phone instead.

## Discussion

### Body Satisfaction

Qualitative findings revealed that body satisfaction was prevalent within this group, reflecting personal body satisfaction and high self-esteem regarding their own body size. This finding is consistent with previous findings in Xu and He (2022) that kindergarten children overall felt good about their body size. This finding could be related to a general difficulty in early to middle childhood in distinguishing between "real self" and the "ideal self" (Harter, 1999). On the other hand, this finding contradicts other research findings in Western culture that body dissatisfaction was evident in children who were between 5 and 8 years old (Lowes & Tiggemann, 2003; Schur et al., 2000; Tiggemann & Wilson-Barrett, 1998). A potential reason behind this discrepancy could be the cultural context. In some traditional Chinese cultural contexts, larger body sizes have been viewed favorably (Tiggemann, 2012). Parents and grandparents prefer their children to be plump instead of slim. Because the plump body size indicates a healthy body; it also indicates that children are being well cared for. These cultural norms and expectations are communicated in Chinese family and community conversations, prevalent in media, but not in Western cultural context. Therefore, it is important to take cultural context into account when studying body size and well-being of young children (Wang, 2021).

However, studies focusing on children aged 8–15 years have shown different results. For example, Fu et al. (2014) found that 67.3% of Chinese children were dissatisfied with their body shape. Similarly, Zhang et al. (2020) reported that Chinese adolescent girls tend to be more dissatisfied with their bodies compared to boys. Wang et al. (2022) further argued that body dissatisfaction can emerge as early as age eight and is associated with measurable aspects of body shape and proportion. Collectively, these findings suggest that as children move through puberty, they become increasingly sensitive to their body image. It seems like increased exposure to environmental messages and social norms from peers (Ruble et al., 1994) may raise body image awareness, potentially leading to lower self-evaluations. Exposure to Western body ideals may also play a role (Anderson-Fye, 2011). Moreover, these results suggested that children's perceptions of their bodies are not static and may be influenced not only by age but also by broader cultural factors over time. Future studies with longitudinal design are needed and will be able to provide a more accurate picture of body image development in children across different cultures.

### Weight Bias

Although this group of children had high personal body satisfaction, they seem to carry weight bias towards others, especially their peers. Our findings indicated the presence of body weight bias among this group of children, showing a strong preference for normal and thin body sizes, regardless of gender. In other words, both boys and girls in the group displayed bias against children with chubbier body types. This finding is consistent with previous research on children in Western cultures and addresses the first

research question, confirming that kindergarten children in a Chinese cultural context also exhibit weight bias.

Furthermore, the results indicated that weight bias is likely to influence the children's behavior, with a tendency to select playmates and best friends who either shared similar body sizes or had slimmer body types. This pattern was obvious, especially among girls, reflecting greater societal emphasis on thinness for girls (Wadden et al., 1991). Although not statistically significant, there were some gender differences in terms of best-friend selection. Specifically, it was found that boys were likely to choose their best friend with a larger body size. This could be due to a preference of a muscular body for males (Lennon & Johnson, 2021).

One interesting finding emerged from the conversation when children explained reasons why they chose a chubby body size as their ideal body size or as his/her best friend. A small number of children indicated choosing a friend in a chubby body size because he/she looks stronger, can help others, and can protect others against bullying. This strong protector prototype has not been observed in other weight bias studies with young children in the current literature. Its emergence may reflect a unique social-cognitive script through which children can associate larger body size with social status and belonging. Whether this script exists in Chinese peer culture could have implications for a cultural relational theory of body image (e.g., Jordan & Hartling, 2002) and merits further exploration. In more individualistic cultures, perhaps the protective benefits of body size are less relevant to peer culture.

### **Peers and Family Members**

Qualitative findings suggest that both family members and peers may influence children's development of body size perception and weight bias, aligning with the conceptual framework proposed by Thompson et al. (1999). Although existing literature indicates that adolescent children may adopt weight-related attitudes from their parents (Rodgers & Chabrol, 2009), this influence was less apparent in our study. Peers are mentioned more frequently in children's responses, indicating a stronger peer influence at a young age. Given the fact that most body image studies focused on adolescents (i.e., Jones, 2001; Jones & Crawford, 2005; Lunde et al., 2006) with few studies on young children (Phares et al., 2004), this finding adds an important piece of information to our current literature that peer influences on body size perceptions may start earlier in childhood.

Our findings support direct and indirect family influences on children's body size perceptions and body acceptance. Participating children reported receiving comments from their parents and grandparents about their body size and healthy eating practices. Additionally, they observed and learned about the active and sedentary lifestyle of their family members related to their bodies. Consistent with previous research (Puhl & Latner, 2007; Rodgers & Chabrol, 2009; Xu & He, 2022), findings from conversations with participating children confirm that family members play an important role in shaping children's body size perceptions. This further supports Tiggemann's (2019) emphasis on the importance of family support in fostering body acceptance. Indeed, Andrew et al. (2016) found that girls who received body acceptance comments from family members expressed greater body appreciation.

### **The Absence of Media**

Surprisingly, while media (i.e., TV programs, books or magazines) are considered a critical part of the conceptual framework (Thompson et al., 1999) explaining body image development, media were not mentioned in the conversations with this group of children. One possible explanation is that, at this early developmental stage, the influence of media may be less salient compared to the influence of peers and family. As a result, media exposure might not yet constitute a significant contributor to body dissatisfaction or the development of weight bias in young children. Another explanation may be that this cohort of young children has had limited exposure to media promoting thin-ideal and anti-fat messages in comparison to their counterparts in Western cultures. These findings raise concerns regarding the applicability of the sociocultural model to children in China, particularly given that media may not serve as a dominant influence relative to family and peers within this cultural context and age group. In other words, media

influence in the Tripartite Influence Model (Thompson et al., 1999) may have boundary conditions and only apply in certain cultures or age-related contexts. This highlights the need for further investigation into the primary factors shaping body image development and weight bias among young children across diverse cultural settings.

### Implications

It is important to cultivate a positive body image at an early age to help children feel confident, become more resistant against weight bias, and develop body satisfaction. Indeed, many researchers have called for interventions to promote positive body image among young children (i.e., Clark & Tiggemann, 2006; Perez et al., 2018; Tiggemann & Slater, 2014). Unfortunately, there have been minimal prevention programs designed for young children to prevent body bias (Paxton & Damiano, 2017). Supported by positive body image perspectives that emphasize respect and appreciation for one's body irrespective of thin-ideal societal norms (Tylka, 2018) as well as the current findings, we recommend three targeted strategies to promote positive body image and prevent the development of weight bias among young children.

The first strategy is to promote body appreciation. Based on findings of the current study, children at this young age seem to be satisfied with their own body, therefore, continuously delivering messages to young children, such as "your body is beautiful", "your body is awesome", "your body can do everything" may help maintain their body satisfaction. Through protective filtering (Tylka, 2018), these positive messages could be delivered verbally by immediate contacts such as parents, educators, and peers. Messages like these could also be communicated through reading children's literature. Previous research has demonstrated that children's picture books could be a powerful tool to introduce strategies to promote positive body image (Faragó et al., 2023; Xu et al., 2024). This strategy could also be easily implemented through discussions of children's picture books that include examples of positive body image.

The second strategy, body acceptance and love, while very closely tied to the first strategy based on appreciation for one's own body, extends its scope to others' bodies, inviting children to be inclusive and welcoming diverse body shapes and sizes. Our study highlighted the importance of perceptions about peers in terms of body image development; therefore, actions may be taken in schools to promote body acceptance among peers. Having events like diversity celebrations at schools may help increase children's awareness of different body sizes and shapes. Bodies of individuals with disabilities may also be included so as to enhance children's understanding of body acceptance. Having support groups at schools could give students opportunities to share concerns and experiences associated with body image. Integrating body positivity in the health education curriculum could also guide children to develop healthy eating and positive body image.

Last but not least, we recommend a strategic emphasis on health over appearance. Current approaches to obesity prevention and intervention may inadvertently convey the message that larger body sizes are undesirable, potentially contributing to body dissatisfaction and weight-based bias among children. To counteract the internalization of such stigmatizing beliefs, public health efforts should prioritize the promotion of health over appearance. Given that positive body image can be cultivated from an early age through increased public awareness and policies that prioritize both mental and physical well-being (Puhl, 2022), educational initiatives should be universally delivered to emphasize that overall health is far more important than body shape or size. Such initiatives have the potential to promote not only physical health, but also psychological well-being related to body image among young children.

The strategies mentioned above are likely to be most effective when implemented in collaboration with family members and peers rather than media given the findings of the present study, along with existing evidence in literature on the significant roles of family and peers in children's development, particularly in relation to weight bias, body image, and health (Tiggemann, 2019). Parents may use positive language when describing or commenting on their own bodies or those of others, particularly in the presence of their children. Parents may also model healthy behaviors by demonstrating

self-acceptance, making nutritious food choices during family meals, providing healthy snacks, and engaging regularly in physical activity. Peers may help reinforce positive language and healthy behaviors through social interactions.

Meanwhile, early childhood curriculum policies, such as the *Guidelines for Kindergarten Education* (《幼儿园教育指导纲要》, MOE, 2001), could include the development of a healthy body image within their content framework to encourage educators to integrate the three strategies into curriculum implementation. To foster a supportive environment that promotes positive attitudes toward body image in school settings, we believe teachers can play a crucial role by incorporating discussions about body shapes and sizes into the curriculum, nurturing peer support, and helping children build resilience against weight-related discrimination.

### **Limitations**

There are several limitations in this study that should be acknowledged. First, participants were all from a Chinese cultural context, therefore, findings may not be applied to other cultural contexts. Second, participants in this study were children between 4 to 7 years old, an age range spanning multiple developmental stages. While children beyond this age range may have different perspectives that need further investigation, future work with larger subsamples representing both early childhood and middle childhood could also reveal important shifts in perspectives. More cross-culture studies on this topic targeting the same age group of children may be needed. Third, although this study included 131 children, the sample size was not big enough to generate the findings to the large population and should be treated with caution. In addition, using a convenience sample of a single kindergarten in eastern-central China could have created sampling bias. Lack of diversity in this region in terms of socioeconomic status and ethnicity may limit generalizability of the findings to the broader Chinese population. Given that the findings are based on young children's verbal responses, which may be another limitation, social desirability effects should also be acknowledged.

It is important to note that the strategies suggested for implementation are based on our findings and the current literature, it was not our intention to measure the effectiveness of the proposed strategies; future research might be helpful to explore the effectiveness of these strategies when implementing them in the intervention studies. Future research could also adopt a mixed-methods approach, incorporating both qualitative and quantitative data to triangulate findings. Additionally, the family and peers' influence merged during children's conversations was interpreted as supporting evidence for body image development rather treated as causal relations. A follow-up interview with these children may help gain an in-depth understanding of family and peers' influences. Additional information obtained from family members and peers using existing valid instruments may provide a more comprehensive understanding.

### **Conclusion**

Understanding weight bias among young children lays a strong foundation for prevention and interventions efforts related to body weight and size. It may also help develop guidelines and strategies to promote the positive body image. Our study found high personal body satisfaction among this group of children; at the same time, it revealed that body image bias exists in young children not only in Western cultures but also in Chinese culture, regardless of gender. Recommended implications for preventing body image bias were provided. In addition, our findings indicate a significant peer influence on body size perceptions, alongside the contributions of family members. The absence of media influence in the current study suggested a unique cultural and age-specific context, which raised important considerations regarding the applicability of the Tripartite Influence Model (Thompson et al., 1999) in non-Western cultural contexts or distinct age groups.

### **Declarations**

*Authors' Declarations*

**Acknowledgements:** Not applicable.

**Authors' contributions:** Tingting Xu contributed to the conception and design of the study, obtained ethical approval, conducted data collection and analysis, drafted the manuscript, and provided critical revisions for intellectual content. Tingting Xu also granted final approval of the version to be published. Yuan He was primarily involved in data analysis, interpretation of results, and manuscript editing. Sarah Savoy contributed mainly to the editing and critical revision of the manuscript.

**Competing interests:** The authors declare that they have no competing interests.

**Funding:** This work was supported by the Stephen F. Austin State University.

**Ethics approval and consent to participate:** Ethical approval was obtained from the institutional review board, followed by signed consent forms from the school principal and parents.

#### **Publisher's Declarations**

**Editorial Acknowledgement:** The editorial process of this article was completed under the editorship of Dr. Stamatios Papadakis through a double-blind peer review with external reviewers.

**Publisher's Note:** Journal of Childhood, Education & Society remains neutral with regard to jurisdictional claims in published maps and institutional affiliation.

## **References**

- Anderson-Fye, E. P. (2004). A "Coca-Cola" shape: Cultural change, body image, and eating disorders in San Andrés, Belize. *Culture, Medicine, and Psychiatry*, 28, 561-595. <https://doi.org/10.1007/s11013-004-1068-4>
- Anderson-Fye, E. P. (2011). Body image in non-western cultures. In T. F. Cash & L. Smolak (Eds.), *Body image: A handbook of science, practice, and prevention* (2<sup>nd</sup> ed., pp.244-252). The Guilford Press.
- Andrew, R., Tiggemann, M., & Clark, L. (2016). Predictors and health-related outcomes of positive body image in adolescent girls: A prospective study. *Developmental Psychology*, 52(3), 463- 474. <https://doi.org/10.1037/dev0000095>
- Baker, A. E. (2005). *Body, self, and society: The view from Fiji*. University of Pennsylvania Press.
- Burmeister, J. M., Zbur, S., & Musher-Eizenman, D. (2016). Active versus inactive portrayals of children with obesity. *Stigma and Health*, 1(2), 101. <http://dx.doi.org/10.1037/sah0000016>
- Brylinsky, J. A., & Moore, J. C. (1994). The identification of body build stereotypes in young children. *Journal of Research in Personality*, 28(2), 170-181. <https://doi.org/10.1006/jrpe.1994.1014>
- Blüher, M. (2019). Obesity: Global epidemiology and pathogenesis. *Nature Reviews Endocrinology*, 15(5), 288-298. <https://doi.org/10.1038/s41574-019-0176-8>
- Carels, R. A., Young, K. M., Wott, C. B., Harper, J., Gumble, A., Oehlof, M. W., & Clayton, A. M. (2009). Weight bias and weight loss treatment outcomes in treatment-seeking adults. *Annals of Behavioral Medicine*, 37(3), 350-355. <https://doi.org/10.1007/s12160-009-9109-4>
- Clark, L., & Tiggemann, M. (2006). Appearance culture in nine-to 12-year-old girls: Media and peer influences on body dissatisfaction. *Social Development*, 15(4), 628-643. <https://doi.org/10.1111/j.1467-9507.2006.00361.x>
- Collins, M. E. (1991). Body figure perceptions and preferences among preadolescent children. *International Journal of Eating Disorders*, 10(2), 199-208. [https://doi.org/10.1002/1098-108X\(199103\)10:2%3C199::AID-EAT2260100209%3E3.0.CO;2-D](https://doi.org/10.1002/1098-108X(199103)10:2%3C199::AID-EAT2260100209%3E3.0.CO;2-D)
- Cramer, P., & Steinwert, T. (1998). Thin is good, fat is bad: How early does it begin?. *Journal of Applied Developmental Psychology*, 19(3), 429-451. [https://doi.org/10.1016/S0193-3973\(99\)80049-5](https://doi.org/10.1016/S0193-3973(99)80049-5)
- Damiano, S. R., Gregg, K. J., Spiel, E. C., McLean, S. A., Wertheim, E. H., & Paxton, S. J. (2015). Relationships between body size attitudes and body image of 4-year-old boys and girls, and attitudes of their fathers and mothers. *Journal of Eating Disorders*, 3, 1-10. <http://doi.org/10.1186/s40337-015-0048-0>
- Department of Health & Social Care. (2022). *Better health childhood obesity*. <https://www.nhs.uk/healthier-families/>
- Dittmar, H., Halliwell, E., & Ive, S. (2006). Does barbie make girls want to be thin? The effect of experimental exposure to images of dolls on the body image of 5- to 8-year-old girls. *Developmental Psychology*, 42(2), 283–292. <https://doi.org/10.1037/0012-1649.42.2.283>
- Dohnt, H. K., & Tiggemann, M. (2005). Peer influences on body dissatisfaction and dieting awareness in young girls. *British Journal of Developmental Psychology*, 23(1), 103-116. <https://doi.org/10.1348/026151004X20658>
- Durso, L. E., & Latner, J. D. (2008). Understanding self-directed stigma: development of the weight bias internalization scale. *Obesity*, 16(52), S80-S86. <https://doi.org/10.1038/oby.2008.448>
- Faragó, F., & Savoy, S., Xu, T., & He, Y. (2023). Body weight representation in children's picturebooks. *Contemporary Issues in Early*

- Childhood*, 26(2). <https://doi.org/10.1177/14639491231215387>
- Fu, L. G., Wang, H. J., Li, X. H., Yang, Y. D., Sun, L. L., & Ma, J. (2014). Analysis on the correlation of body image dissatisfaction and body shape parameters among children and adolescents. *Chinese Journal of Child Health Care*, 22(11), 1174–1178.
- Flannery-Schroeder, E. C., & Chrisler, J. C. (1996). Body esteem, eating attitudes, and gender-role orientation in three age groups of children. *Current Psychology*, 15, 235-248.
- Gondoli, D. M., Corning, A. F., Salafia, E. H. B., Bucchianeri, M. M., & Fitzsimmons, E. E. (2011). Heterosocial involvement, peer pressure for thinness, and body dissatisfaction among young adolescent girls. *Body Image*, 8(2), 143-148. <https://doi.org/10.1016/j.bodyim.2010.12.005>
- Harriger, J. A., Calogero, R. M., Witherington, D. C., & Smith, J. E. (2010). Body size stereotyping and internalization of the thin ideal in preschool girls. *Sex Roles*, 63, 609–620. <https://doi.org/10.1007/s11199-010-9868-1>
- Harriger, J. A., & Trammell, J. P. (2022). First do no harm: Measuring weight bias beliefs in preschool-age children. *Body Image*, 40, 176-181. <https://doi.org/10.1016/j.bodyim.2021.12.005>
- Harriger, J. A., Schaefer, L. M., Thompson, J. K., & Cao, L. (2019). You can buy a child a curvy Barbie doll, but you can't make her like it: Young girls' beliefs about Barbie dolls with diverse shapes and sizes. *Body Image*, 30, 107-113. <https://doi.org/10.1016/j.bodyim.2019.06.005>
- Harrison, K. (2000). Television viewing, fat stereotyping, body shape standards, and eating disorder symptomatology in grade school children. *Communication Research*, 27(5), 617-640. <https://doi.org/10.1177/009365000027005003>
- Harrison, K., & Hefner, V. (2006). Media exposure, current and future body ideals, and disordered eating among preadolescent girls: A longitudinal panel study. *Journal of Youth and Adolescence*, 35, 146-156. <https://doi.org/10.1007/s10964-005-9008-3>
- Harrison, S., Rowlinson, M., & Hill, A. J. (2016). "No fat friend of mine": Young children's responses to overweight and disability. *Body Image*, 18, 65-73. <https://doi.org/10.1016/j.bodyim.2016.05.002>
- Harter, S. (1999). *The construction of the self*. Guilford Press.
- Helfert, S., & Warschburger, P. (2011). A prospective study on the impact of peer and parental pressure on body dissatisfaction in adolescent girls and boys. *Body Image*, 8(2), 101-109. <https://doi.org/10.1016/j.bodyim.2011.01.004>
- Heatherton, T. F. (2011). Body image and gender. *International Encyclopedia of the Social & Behavioral Sciences*, 1282-1285. <https://doi.org/10.1016/B0-08-043076-7/03856-0>
- Himmelstein, M. S., & Puhl, R. M. (2019) Weight-based victimization from friends and family: implications for how adolescents cope with weight stigma. *Pediatric Obesity*, 14, e12453. <https://doi.org/10.1111/jipo.12453>.
- Holt, K., & Ricciardelli, L. A. (2002). Social comparisons and negative affect as indicators of problem eating and muscle preoccupation among children. *Journal of Applied Developmental Psychology*, 23(3), 285-304. [https://doi.org/10.1016/S0193-3973\(02\)00108-9](https://doi.org/10.1016/S0193-3973(02)00108-9)
- Holub, S. C., Tan, C. C., & Patel, S. L. (2011). Factors associated with mothers' obesity stigma and young children's weight stereotypes. *Journal of Applied Developmental Psychology*, 32, 118–126. <https://doi.org/10.1016/j.appdev.2011.02.006>
- Hutchinson, N., & Calland, C. (2019). *Body image in the primary school: A self-esteem approach to building body confidence* (2<sup>nd</sup> ed.). Routledge.
- Jones, D. C. (2001). Social comparison and body image: Attractiveness comparisons to models and peers among adolescent girls and boys. *Sex Roles*, 45, 645-664. <https://doi.org/10.1023/a:1014815725852>
- Jones, D. C., & Crawford, J. K. (2005). Adolescent boys and body image: Weight and muscularity concerns as dual pathways to body dissatisfaction. *Journal of Youth and Adolescence*, 34, 629-636. <https://doi.org/10.1007/s10964-005-8951-3>
- Jordan, J. V., & Hartling, L. M. (2002). New developments in relational-cultural theory. In M. Ballou & L. S. Brown (Eds.), *Rethinking mental health and disorder: Feminist perspectives* (pp. 48–70). Guilford Press.
- Kawamura, K. Y. (2011). Asian American body image. In T. F. Cash & L. Smolak (Eds.), *Body image: A handbook of science, practice, and prevention* (2<sup>nd</sup> ed., pp.229-243). The Guilford Press.
- Kim, H., & Han, T. I. (2021) Body image concerns among South Korean kindergarteners and relationships to parental, peer, and media Influences. *Early Childhood Education Journal*, 49, 177–184. <https://doi.org/10.1007/s10643-020-01059-z>
- Kornilaki, E. (2014). Peer acceptance of obese preschool children. In *Proceedings of the XVI European Conference on Developmental Psychology* (pp.121-123). Medimond International Proceedings.
- Latner, J. D., & Stunkard, A. J. (2003). Getting worse: The stigmatization of obese children. *Obesity Research*, 11(3), 452-456. <https://doi.org/10.1038/oby.2003.61>
- Lennon, S. J., & Johnson, K.K.P. (2021). Men and muscularity research: A review. *Fash Text* 8, 20. <https://doi.org/10.1186/s40691-021-00245-w>

- Levine, M. P., & Harrison, K. (2004) Media's role in the perpetuation and prevention of negative body image and disordered eating. In J. K. Thompson (Ed.), *Handbook of eating disorders and obesity* (pp. 695–717). Wiley.
- Lowes, J., & Tiggemann, M. (2003). Body dissatisfaction, dieting awareness and the impact of parental influence in young children. *British Journal of Health Psychology*, 8(2), 135-147. <https://doi.org/10.1348/135910703321649123>
- Lunde, C., Frisén, A., & Hwang, C. P. (2006). Is peer victimization related to body esteem in 10-year-old girls and boys?. *Body Image*, 3(1), 25-33. <https://doi.org/10.1016/j.bodyim.2005.12.001>
- Markus, H. R., & Hamedani, M. G. (2020). People are culturally-shaped shapers: The psychological science of culture and culture change. In Kitayama S., Cohen D. (Eds.), *Handbook of cultural psychology* (2<sup>nd</sup> ed., pp. 11–52). Guilford Press.
- Miles, M. B. & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2<sup>nd</sup> Ed.). Sage.
- ObamaWhiteHouse. (2017). *Let's move*. <https://letsmove.obamawhitehouse.archives.gov/>
- MOE. (2001). 幼儿园教育指导纲要（试行）. [Guidelines for Kindergarten Education]. [http://www.moe.gov.cn/srcsite/A06/s3327/200107/t20010702\\_81984.html](http://www.moe.gov.cn/srcsite/A06/s3327/200107/t20010702_81984.html)
- Paxton, S. J., & Damiano, S. R. (2017). The development of body image and weight bias in childhood. *Advances in Child Development and Behavior*, 52, 269-298. <https://doi.org/10.1016/bs.acdb.2016.10.006>
- Pearl, R. L., & Puhl, R. M. (2018). Weight bias internalization and health: a systematic review. *Obesity Reviews*, 19(8), 1141-1163. <https://doi.org/10.1111/obr.12701>
- Perez, M., Kroon Van Diest, A. M., Smith, H., & Sladek, M. R. (2018). Body dissatisfaction and its correlates in 5-to 7-year-old girls: A social learning experiment. *Journal of Clinical Child & Adolescent Psychology*, 47(5), 757-769. <https://doi.org/10.1080/15374416.2016.1157758>
- Phares, V., Steinberg, A. R., & Thompson, J. K. (2004). Gender differences in peer and parental influences: Body image disturbance, self-worth, and psychological functioning in preadolescent children. *Journal of Youth and Adolescence*, 33(5), 421-429. <https://doi.org/10.1023/B:JOYO.0000037634.18749.20>
- Pont, S. J., Puhl, R., Cook, S. R., Slusser, W. (2017). Stigma experienced by children and adolescents with obesity. *Pediatrics*, 140 (6), e20173034. <https://doi.org/10.1542/peds.2017-3034>
- Puhl, R. M. (2022). Weight stigma, policy initiatives, and harnessing social media to elevate activism. *Body Image*, 40, 131-137. <http://doi.org/10.1016/j.bodyim.2021.12.008>
- Puhl, R. M., & King, K. M. (2013). Weight discrimination and bullying. *Best Practice & Research Clinical Endocrinology & Metabolism*, 27(2), 117-127. <http://doi.org/10.1016/j.beem.2012.12.002>
- Puhl, R. M., Luedicke, J., & DePierre, J. A. (2013). Parental concerns about weight-based victimization in youth. *Childhood Obesity*, 9(6), 540-548. <http://doi.org/10.1089/chi.2013.0064>
- Puhl, R. M. & Latner J. D. (2007). Stigma, obesity, and the health of the nation's children. *Psychological Bulletin*, 133(4), 557–580. <https://doi.org/10.1037/0033-2909.133.4.557>
- Puhl, R. M., Lessard, L. M. (2020). Weight stigma in youth: Prevalence, consequences, and considerations for clinical practice. *Current Obesity Report*, 9, 402–411. <https://doi.org/10.1007/s13679-020-00408-8>
- Puhl, R. M., Luedicke, J. (2012). Weight-based victimization among adolescents in the school setting: emotional reactions and coping behaviors. *Journal of Youth and Adolescence*, 41, 27–40. <https://doi.org/10.1007/s10964-011-9713-z>.
- Puhl, R. M., Wall, M. M., Chen, C., Bryn Austin, S., Eisenberg, M.E., Neumark-Sztainer, D. (2017). Experiences of weight teasing in adolescence and weight-related outcomes in adulthood: A 15-year longitudinal study. *Preventive Medicine*, 100, 173–179. <https://doi.org/10.1016/j.ypmed.2017.04.023>
- Rand, C. S., & Resnick, J. L. (2000). The “good enough” body size as judged by people of varying age and weight. *Obesity Research*, 8(4), 309–316. <https://doi.org/10.1038/oby.2000.37>
- Ricciardelli, L. A., & McCabe, M. P. (2001). Self-esteem and negative affect as moderators of sociocultural influences on body dissatisfaction, strategies to decrease weight, and strategies to increase muscles among adolescent boys and girls. *Sex Roles*, 44, 189-207. <https://doi.org/10.1023/A:1010955120359>
- Rich, S. S., Essery, E. V., Sanborn, C. F., DiMarco, N. M., Morales, L. K., & LeClere, S. M. (2008). Predictors of body size stigmatization in Hispanic preschool children. *Obesity*, 16, S11–S17. <https://doi.org/10.1038/oby.2008.446>
- Richardson, S. A., Goodman, N., Hastorf, A. H., & Dornbusch, S. M. (1961). Cultural uniformity in reaction to physical disabilities. *American Sociological Review*, 26 (2), 241–247. <https://doi.org/10.2307/2089861>
- Rodgers, R., & Chabrol, H. (2009). Parental attitudes, body image disturbance and disordered eating amongst adolescents and young adults: A review. *European Eating Disorders Review*, 17, 137–151. <https://doi.org/10.1002/erv.907>
- Ruble, D. N. (1983). The development of social comparison processes and their role in achievement-related self-socialization. In E. T.

- Higgins, D. N. Ruble, & W. W. Hartup (Eds.), *Social cognition and social development: A sociocultural perspective* (pp. 134-157). Cambridge University Press.
- Ruble, D. N., Eisenberg, R., & Higgins, E. T. (1994). Developmental changes in achievement evaluation: Motivational implications of self-other differences. *Child Development*, 65(4), 1095-1110. <https://doi.org/10.1111/j.1467-8624.1994.tb00805.x>
- Sands, E. R., & Wardle, J. (2003). Internalization of ideal body shapes in 9–12-year-old girls. *International Journal of Eating Disorders*, 33(2), 193-204. <https://doi.org/10.1002/eat.10121>
- Schousboe, K., Visscher, P. M., Erbas, B., Kyvik, K. O., Hopper, J. L., Henriksen, J. E., ... & Sørensen, T. I. A. (2004). Twin study of genetic and environmental influences on adult body size, shape, and composition. *International Journal of Obesity*, 28(1), 39-48. <https://doi.org/10.1038/sj.ijo.0802524>
- Schur, E. A., Sanders, M., & Steiner, H. (2000). Body dissatisfaction and dieting in young children. *International Journal of Eating Disorders*, 27(1), 74-82. [https://doi.org/10.1002/\(SICI\)1098-108X\(200001\)27:1<74::AID-EAT8>3.0.CO;2-K](https://doi.org/10.1002/(SICI)1098-108X(200001)27:1<74::AID-EAT8>3.0.CO;2-K)
- Shomaker, L. B., & Furman, W. (2009). Parent–adolescent relationship qualities, internal working models, and attachment styles as predictors of adolescents' interactions with friends. *Journal of Social and Personal Relationships*, 26(5), 579-603. <https://doi.org/10.1177/02654075093544>
- Smolak, L. (2004). Body image in children and adolescents: Where do we go from here? *Body Image*, 1, 15–28. [https://doi.org/10.1016/S1740-1445\(03\)00008-1](https://doi.org/10.1016/S1740-1445(03)00008-1)
- Smolak, L. (2011). Body image development in childhood. In Cash, T. F. & Smolak, L. (Eds), *Body image: A handbook of science, practice, and prevention* (2<sup>nd</sup> ed., pp 67-75). The Guilford Press.
- Smolak, L., & Levine, M. P. (2001). Body image in children. In J. K. Thompson, & L. Smolak (Eds.), *Eating disorders and obesity in youth: Assessment, prevention and treatment* (pp. 41–66). American Psychological Association.
- Spiel, E. C., Paxton, S. J., & Yager, Z. (2012). Weight attitudes in 3- to 5-year-old children: Age differences and cross-sectional predictors. *Body Image*, 9, 524-527. <https://doi.org/10.1016/j.bodyim.2012.07.006>
- Spiel, E. C., Rodgers, R. F., Paxton, S. J., Wertheim, E. H., Damiano, S. R., Gregg, K. J., & McLean, S. A. (2015). 'He's got his father's bias': Parental influence on weight bias in young children. *British Journal of Developmental Psychology*, 34(2), 198-211. <https://doi.org/10.1111/bjdp.12123>
- Tiggemann, M. (2012). Sociocultural perspectives on body image. *Encyclopedia of Body Image and Human Appearance*, 2, 758-765. <http://doi.org.10.1016/B978-0-12-384925-0.001>
- Tiggemann, M. (2019). Relationships that cultivate positive body image through body acceptance. In T. L. Tylka & N. Piran (Eds.), *Handbook of positive body image and embodiment* (pp. 214-222). Oxford University Press.
- Tiggemann, M., & Anesbury, T. (2000). Negative stereotyping of obesity in children: The role of controllability beliefs. *Journal of Applied Social Psychology*, 30(9), 1977-1993. <https://doi.org/10.1111/j.1559-1816.2000.tb02477.x>
- Tiggemann, M., & Slater, A. (2014). NetTweens: The internet and body image concerns in preteenage girls. *The Journal of Early Adolescence*, 34(5), 606-620. <https://doi.org/10.1177/0272431613501083>
- Tiggemann, M., & Wilson-Barrett, E. (1998). Children's figure ratings: Relationship to self-esteem and negative stereotyping. *International Journal of Eating Disorders*, 23(1), 83-88. [https://doi.org/10.1002/\(SICI\)1098-108X\(199801\)23:1<83::AID-EAT10>3.0.CO;2-O](https://doi.org/10.1002/(SICI)1098-108X(199801)23:1<83::AID-EAT10>3.0.CO;2-O)
- Thompson, J. K., Heinberg, L. J., Altabe, M., & Tantleff-Dunn, S. (1999). *Exacting beauty: Theory, assessment, and treatment of body image disturbance*. American Psychological Association. <https://doi.org/10.1037/10312-000>
- Tylka, T. L. (2018). Overview of the field of positive body image. In E. A. Daniels, M. M. Gillen, & C. H. Markey (Eds.), *Body positive: Understanding and improving body image in science and practice* (pp. 6-33). Cambridge University Press.
- van den Berg, P., Thompson, J. K., Obremski-Brandon, K., & Coovert, M. (2002). The tripartite influence model of body image and eating disturbance: A covariance structure modeling investigation testing the mediational role of appearance comparison. *Journal of Psychosomatic Research*, 53(5), 1007-1020. [https://doi.org/10.1016/S0022-3999\(02\)00499-3](https://doi.org/10.1016/S0022-3999(02)00499-3)
- van Geel, M., Vedder, P., & Tanilon, J. (2014). Are overweight and obese youths more often bullied by their peers? A meta-analysis on the correlation between weight status and bullying. *International Journal of Obesity*, 38(10), 1263-7. <http://doi.org/10.1038/ijo.2014.117>
- Vygotsky, L. S., & Cole, M. (1978). *Mind in society: Development of Higher Psychological Processes*. Harvard University Press.
- Wadden, T. A., Brown, G., Foster, G. D., & Linowitz, J. R. (1991). Salience of weight-related worries in adolescent males and females. *International Journal of Eating Disorders*, 10(4), 407-414. [https://doi.org/10.1002/1098-108X\(199107\)10:4%3C407::AID-EAT2260100405%3E3.0.CO;2-V](https://doi.org/10.1002/1098-108X(199107)10:4%3C407::AID-EAT2260100405%3E3.0.CO;2-V)
- Wang, H. (2021). The somatic turn in the aesthetics and its significance—A cross-cultural perspective. *Academic Journal of Humanities & Social Sciences*, 4(6), 66-70. <http://doi.org/10.25236/AJHSS.2021.040611>

- Wang, Y., Cao, R., Peng, X., Zhang, L., Zhang, Z., & Fu, L. (2022). Association between body image dissatisfaction and body anthropometric indices among Chinese children and adolescents at different developmental stages. *Frontiers in Public Health*, 10, 926079. <https://doi.org/10.3389/fpubh.2022.926079>
- World Health Organization. (2024). *World obesity day 2024 - obesity & youth: Young people catalyzing change*. <https://www.who.int/news-room/events/detail/2024/03/04/default-calendar/world-obesity-day-2024-obesity-youth-young-people-catalyzing-change>
- Worobey, J., & Worobey, H. S. (2014). Body-size stigmatization by preschool girls: In a doll's world, it is good to be "Barbie". *Body Image*, 11(2), 171-174. <https://doi.org/10.1016/j.bodyim.2013.12.001>
- Xu, T. & He, Y. (2022). Body size perceptions among normal-weight kindergarten children in China. *International Journal of Early Childhood*, 54, 245–259. <http://dx.doi.org/10.1007/s13158-021-00300-z>
- Xu, T., He, Y., Faragó, F., & Savoy, S. (2023). Positive body image-related strategies in children's Picturebooks. *Early Childhood Education Journal* 52, 1447-1458. <https://doi.org/10.1007/s10643-023-01543-2>
- Xu, T., & Nerren, J. (2017). Investigating young children's perceptions of body size and healthy habits. *Early Childhood Education Journal*, 45, 499–507. <http://doi.org/10.1007/s10643-016-0786-x>
- Yin, R. (1994). *Case study research: Design and methods* (2nd ed.). Sage.
- Zhang, Y., Li, T., Yao, R., Han, H., Wu, L., et al. (2020). Comparison of body-image dissatisfaction among Chinese children and adolescents at different pubertal development stages. *Psychology Research and Behavior Management*, 13, 555–562. <https://doi.org/10.2147/PRBM.S242645>

# Sustainable preschools: A model for change

Ingrid Pramling Samuelsson<sup>1</sup>, Ingrid Engdahl<sup>2</sup>, Eva Ärlemalm-Hagsér<sup>3</sup>

**Abstract:** This article gives a thematic overview of the overall knowledge development from a three-year research and development programme *Sustainable Preschools* (2021–2024) is presented. The aim of the programme was to strengthen education for sustainability in a large group of Swedish preschools. The programme meets the need for further research on how preschool teachers', and their principals and management leaders, systematically develop high-quality education for sustainability (EfS). The programme included 300 participants - 200 preschool teachers from different preschools and around 90 principals and management leaders from different layers in the organisation of nine participating municipalities/providers. The thematic overview included six articles and one report from the programme. The findings from these studies showed four key aspects for change, beside a dedicated prioritisation: 1) The Programme Structure and organisation, 2) Promoting a Sustainable Leadership in ECCE, 3) Promoting New Knowledge about EfS, and 4) Communication is Important for Transformative Education. These key aspects supported EfS and the transition in the participating preschools and municipalities towards becoming Sustainable Preschools and could well serve as an implementation model.

## Article History

Received: 18 June 2025

Accepted: 22 January 2026

## Keywords

Early childhood education;  
Sustainable development;  
Large scale research and  
development programme

## Introduction

In the last 20 years the scientific understandings of the escalation of the threats on humans and more-than-humans lives due to the climate change and pollution (Intergovernmental Panel on Climate Change [IPCC], 2023) strongly developed. Understandings that urge for a faster transition towards a more sustainable Earth and the need to scale up the actions on all levels from policy and international agreements to national laws, steering documents and regulations. Education has a pivotal role to play in the transformation towards a sustainable society and world. Early Childhood Care and Education (ECCE) have an important role in this task.

In ECCE, the research on early education for sustainability (ECEfS) is a growing field (Davis, et al., 2024). Studies on teachers' understandings of ECEfS (Hedefalk et al., 2015), ECEfS pedagogies and content, (Ärlemalm-Hagsér, 2022; Caiman et al., 2022), together with new theoretical perspectives on human-nature relation (Malone, 2016; Taylor, 2017) and indigenous perspective (Ritchie, 2014) have developed insight and knowledge over the years. Less prominent areas of research are leadership and ECEfS, citizenship and ECEfS, and curriculum policies on sustainability from international and national perspectives (Davis et al., 2024). Even fewer studies report about which factors that are beneficial within the development of policy and professional development in order to promote ECEfS and ensuring young children's learning about sustainability today and for the future.

A *transformative development* as idea is an important aspect in the "whole school approach" is introduced by Mathie and Wals (2022) and is also included in the United Nations Educational, Scientific and Cultural Organization (UNESCO) recommendations for EfS (UNESCO, 2022a). The recommendations

<sup>1</sup> University of Gothenburg, Faculty of Education, Department of Education, Communication and Learning, Gothenburg, Sweden, e-mail: [Ingrid.Pramling@ped.gu.se](mailto:Ingrid.Pramling@ped.gu.se), ORCID: <https://orcid.org/0000-0003-0321-3733>

<sup>2</sup> Mälardalen University, School of Education, Department of Educational Sciences and Arts, Västerås, Sweden, e-mail: [ingridengdahl@gmail.com](mailto:ingridengdahl@gmail.com), ORCID: <https://orcid.org/0000-0003-4935-4216>

<sup>3</sup> Mälardalen University, School of Education, Department of Educational Sciences and Arts, Västerås, Sweden, e-mail: [Eva.Arlemalm-Hagser@mdu.se](mailto:Eva.Arlemalm-Hagser@mdu.se), ORCID: <https://orcid.org/0000-0002-7795-4051>

for EfS and youth clearly state the importance of listening to and empowering children and youth. However, in these policy document younger children (Birth to 8 years) and ECCE are not visible. Ärlmalm-Hagsér and Elliott (2026) developed a whole centre approach (WCA) model for ECCE settings based on studies from early childhood settings. Here the Swedish Sustainable Preschools programme and an Australian case study add knowledge of importance to all countries. *Transforming education for the future. Education 2030* (UNESCO, 2022a) links EfS to the United Nations (UN) Sustainable Development Goals and Agenda 2030. The Declaration from the Tashkent meeting (UNESCO, 2022b) as well as reports from ICCP (2023) focussed on the urgency of transformative EfS.

In this article our focus is professional development in ECCE in order to promote ECEfS and the factors that contributes to a robust implementation of ECEfS. The article reanalyses studies from a large-scale Swedish research and development programme *Sustainable preschools* (Innovation, Forskning och Utveckling i Skola och Förskola [Innovation, Research & Development in School and Preschool] IFOUS, 2024). In the programme the overall objectives were to study and to develop understandings built on earlier research on ECEfS and to construct new knowledge among the participants about curriculum development, leadership and children's participation and agency (citizenship). The aim of this article is to explore which factors that contribute in the programme to implementation of ECEfS. The study was guided by two research questions:

- 1) What types of initiatives promote implementation of ECEfS in the programme?
- 2) Which strategic decisions can be identified that promote implementation of ECEfS in the organisation?

### **Research on Implementing Early Childhood Education for Sustainability**

Earlier studies on how to implement EfS in school and preschool shows the need for clear strategies in the organisation where management leaders and the principals have a crucial role to play, as proactive leaders (Borg & Vinterek, 2020; Mogren & Gericke, 2017a, 2017b). In a study of school leaders implementing education for sustainability in schools in Sweden, Forssten Seiser et al. (2023) argued for the use of three different improvement phases: initiation, implementation and institutionalisation. Today cooperation between university and the surrounding society is increasing. Studies on professional development and organisation change in collaboration between school and preschool practises and university researchers is a growing field (Farrell et al, 2021). Sjölund (2024) argues that the infrastructure that is set in place to facilitate organisational learning and change are crucial to achieve educational improvement. In his study about research-practice partnerships (RPPs), the finding shows that aspects of boundaries, discourses and positioning of actors, as well as roles and research, affect the development of the RPPs. In the *Sustainable preschools* programme, the structure for the collaboration between participants, IFOUS, preschool managers, principals, preschool teachers and researchers were set (see Table 1). According to Sjölund and Lindvall (2024), structure in large-scale educational RPP can develop both boundaries and possibilities for development. In the *Sustainable preschool* programme, the structure was set by IFOUS and was collaborated with the other participants.

Other research on implementing EfS in school and preschools focus on *The Whole School Approach to Sustainability* (WSA) (Wals et al., 2024) with many case studies from various countries, on how they have dealt with working towards a WSA. The authors pinpoint diverse educational perspectives, priorities, and practices, and show provoking dialogues and questions. With a WSA, sustainability is something to embody, to enact, and to live, and it connects with a redesign perspective. The current system is viewed as highly problematic. Common actions include resistance, struggle, and the endings of un-sustainable traditions and routines. The workplace culture is a crucial factor for change. In some cases, there is a need for small steps based on traditions, while in cultures with space for autonomy, voice, and freedom co-design, transformation may be easier. However, Wals and colleagues stress that a change towards WSA is not an easy road anywhere.

In a study about WSA and ECCE, Borg and colleagues (2024) point at a strong relationship between

WSA and Global Citizenship on a system level. This means that there has to be an awareness about the functions of social, economic and environmental engagement locally and globally for equity and sustainability. WSA demands three activity points: Engagement in the environment, having ongoing cooperation with the society around the setting, and ESD has to be part of the curriculum. The leading argument is that ECCE settings have better conditions than schools for this WSA-approach, developed as four aspects: 1) There is a wholeness in the education in ECCE, 2) Most new ECCE settings are in climate-adapted buildings, where old plastic toys are discarded, and there are containers for re-cycling, 3) Children are in focus for learning, play and care, 4) Teaching is thematic.

Another perspective of transformative change is the learning process of individuals in their institutions. Stavholm (2024) studied how an ECCE work team collectively learns about two contemporary challenges in ECCE, by means of a theoretical framework. Reading research articles and watching video-recordings played a central part when the participants appropriate theoretical concepts. Time for dialogues based on scientific knowledge are important matters for the learning process when the work team change their reasoning about the teacher's role. Theoretical concepts discussed in a mediating process may enable teacher agency. This result implies that spending time on theory becomes important when organizing professional development in ECCE settings.

Follow-ups, evaluations and continued focus on the task at hand are weaker points. This study analyses a larger Swedish project, *Sustainable preschools*, and will bring forward crucial factors and initiatives for a transformative and transactional sustainable implementation of ECEfS after the formal project period.

### **Theoretical Framework**

The theoretical perspective in this article is built on three different improvement phases developed by Forssten Seiser and colleagues (2023): initiation, implementation and institutionalisation. According to Forssten Seiser and colleagues (2023) the initiate phase starts with an introduction of the content to be developed. The participants take part in a process where they are encouraged to develop new knowledge within a structure that give them support in mappings, leading actions and by a facilitating organisation. A vision is formulated aiming to drive the progress of the cultural change further in the education, teaching and organisation. In the implementation phase, the new knowledge and new structures should now be put into practice. Everyone in the organisation is now starting to work in line with the vision, implementing EfS in their everyday work and education. Following Forssten Seiser and colleagues (2023), this phase is often conflict-filled, as some participants may not yet be prepared for the necessary changes. And especially this phase needs to be set in a long-term process where support for the changes is fundamental. In the final phase, the institutionalisation, the change and actions are anchored into everyday routines, education, teaching and organisation and are described by the participants as this is *how we do things around here*.

The research and development programmes run by IFOUS have multiple partners and strive to expansive learning opportunities for all partners and participants. Four fundamental principles guide the programmes (Hirsh et al., 2024): 1. Children need to receive high-quality teaching that is based on their actual learning needs in local contexts. 2. Teachers are key people. It is in direct contact during teaching and activities that change and improvement for children can be achieved. 3. Teachers possess extensive professional knowledge. They have a long academic education, continuously develop professional knowledge and judgment, and know their children and their context. 4. Therefore, teachers are best placed to analyse the learning needs of their children based on such analyses, (re)shape their teaching so that these needs are met.

All levels, from children and teachers to principals and managers, follow these principles and are both important and involved in the processes in the programme within a transformative and transactional education with children's participation and involvement in focus. With a cultural-historical activity theory (Engeström & Sannino, 2010), organised and systematic development of teaching activities in local settings can be understood as an activity system, where an entire teaching collective whose common aspiration is that the teaching development work should lead to teaching that increasingly meets the learning needs of

children. Furthermore, and as important, are the complex interrelationship between different activity levels and partners in the systems. As Farrell et al (2021) describe a research-practice partnership in education:

A long-term collaboration aimed at educational improvement or equitable transformation through engagement with research. These partnerships are intentionally organized to connect diverse forms of expertise and shift power relations in the research endeavor to ensure that all partners have a say in the joint work (p. iv).

The actors in each system have partly different areas of responsibility, but at the same time share an aspiration towards the same goals. In the theoretical perspective of the cultural-historical activity theory (Engeström & Sannino, 2010) one talks about expansive learning, which is qualitatively different from learning something given in advance (appropriated learning), but also from the idea of learning through participation as in a master-apprentice relationship. In expansive learning, those who are to learn together set off on a collective journey through the zone of proximal development and learn something “that is not yet there” (Engeström & Sannino, 2010; Vygotsky, 1978).

## Method

In the section we clarify the context for the study, present the participants, the data and how it was collected, and analyzed. We finish with ethical considerations.

### Context and Participants

The programme described in this article, *Sustainable Preschools* (IFOUS, 2021), was initiated by municipalities and independent providers to meet the need of re-orienting education towards EfS, this because of that the National Curriculum for the Preschool (National Agency for Education, 2019) had been and clear intentions and goals to strive for an education for sustainability were stated on broad basis. IFOUS, an independent research institute, IFOUS, managed the collaboration between municipalities, providers and researchers. The objectives for the programme were:

- To strengthen the preschool's overall education for sustainability
- To improve children's knowledge and familiarity with education for sustainability
- To educate citizens who contribute to a greater degree to sustainability
- To develop leadership and knowledge about the process of implementation of sustainability in ECCE.

In addition, there were goals for the research about identifying what scientific basis and what examples of proven experience emerged, as well as the working methods and contents during the work on learning for sustainability in preschool. We also studied communication between children and adults and between children with a special focus on what participation were possible for the children in education and teaching about and for sustainability and what development in children's knowledge of and familiarity with sustainable development was evident. A final question was to study how the management and preschool staff at different levels understood and worked with leadership in the work on sustainability in preschool?

The work in the programme has taken place in two arenas: in the programme-wide arena, where all participants have met in development and leadership seminars, and in the participants' respective home arenas, in their preschools, but also sharing the ongoings in the programme with (all) other settings in the municipalities. The intention of the tasks from the researchers was to make teachers aware of what EfS could be with young children, what kind of communication is necessary, and how to use play in EfS.

### Data and Analysis

The data is diverse, and the thematic overview includes analyses of 11 different tasks: 3 digital surveys, three questionnaires with open and closed questions, three types of systematic child talks, focus group communications and 27 interviews of teachers and principals, and the final report (see the

programme report IFOUS, 2024). A consistent thread in our analyses for this thematic overview is content analysis (Braun et al., 2019) where all three researchers read all data independently before an analytical discussion about possible categories and themes was initiated, followed by the lead author's careful repeated readings and final choice of examples and excerpts for presenting the results.

### Ethical Considerations

Ethical guidelines from the Swedish Research Council (2024) and EECERA (Bertram et al., 2024) were considered during the research design and process. The research part is approved by The Ethic Commission in Sweden (dnr 2021-06472.01). Information as well as a consent form were provided to all participants in the project. All data constructed in the project is kept in a secure format and location at Mälardalen University so that anonymity and confidentiality cannot be breached and the storage is secured.

### Results

The analyses of data showed engagement on all levels, from maintenance staff and staff working with children to the highest management of the preschools. This is of course a success factor, albeit always present during ongoing projects. For the *Sustainable preschools* programme, collaboration and long-term commitments at all levels to reorient all education towards sustainability have been important values all through the years. With that noted, we will now present the four-key aspects of the programme: 1) The Programme Structure and organisation, 2) Promoting a Sustainable Leadership in ECCE, 3) Promoting New Knowledge about EfS, and 4) Communication is Important for Transformative Education.

#### The Programme Structure and Organisation

The IFOUS programmes follow a strict structure, with regular meetings for the different participants, see Table 1. The programme, 2021–2024, was financed by the municipalities, providers and universities, with one requisite being the participation from all levels in the organisation. Allocating resources within the ordinary budget is a conscious decision aiming at guaranteeing a continued focus on EfS also after the IFOUS programme's time was over. In total, there were 9 managers for the organisations in the municipalities, 20 local process leaders, 75 principals and around 200 teachers, representing 200 preschools, us three researchers, and a project manager from IFOUS.

On a general level for the entire programme, there was a steering group with the 9 heads of department for education, one researcher and one IFOUS project manager. All initiatives for development and research were confirmed by the steering group, including setting the agenda for all meetings and seminars. A first step in the program in 2021 was that the steering group developed a logic structure from the objectives for the whole programme. These were analysed in different activities, performance, three impact levels and a vision. The final vision in the program logic structure was: i) that children's knowledge and familiarity with education for sustainability had improved during the program and that, ii) children were seen as, as gives opportunities to, as citizens to contribute to a greater degree to sustainability.

In the beginning of the programme, the meetings were digital, due to the Covid 19 pandemic, but from 2022 live seminars were prioritised. The participants met in groups with representation from all partners, the same groups throughout the three years (Table 1).

**Table 1**  
*Meetings and Seminars in the Programme*

2021–2024	Participants	Meetings	Live/digital
Steering group, heads of department	11; 9 managers, 1 researcher, 1 IFOUS leader	2-3 / semester, In total 19	5 live 14 digital
Local process leaders	18: 15 process leaders, 2 researchers, 1 IFOUS leader	2-3/semester, In total 22	13 live 9 digital
All leaders	Around 75	1/semester In total 7	3 live 4 digital
All participants	Around 300	1/ semester	5 live

		In total 7	2 digital
Local development groups	All participants from each provider	1-3/semester Organised by the provider	Mostly live

These groups were important for the participants to share ideas and experiences, and to reflect on the processes in EfS. During these seminars, the researchers were partly responsible for the programme and gave lectures and invited other researchers. The researchers suggested specific tasks designed for promoting development in practice. All the different kinds of data were produced in practice, and all data was uploaded on a secure digital platform at the university. This data was analysed for knowledge production, reported in scientific publications, and of course also as feed-back to the participants.

Since the preschools that participated through their preschool teachers are differently organised by the nine participating partners, each partner developed their own local organisation, with a local steering group, 1-2 process leaders, and a network of meetings for participating principals and teachers. The development took place within the daily education programme within the preschools theme-based and play-oriented teaching (Ärlemalm-Hagsér, et al., 2024). In this way, the teachers and principals had an ownership of the content in *Sustainable Preschools* and were able to relate EfS to their everyday practice. Although the participants had different roles and responsibilities, it was clear that they all strived towards the programme objectives and vision in a collective process.

The strict structure and organisation for running research and development programmes, firmly founded within cultural-historical activity theory and expansive learning (Engeström & Sannino, 2010; Vygotsky, 1978) managed by the IFOUS leader contributed to the success. The robust structure and organisation, length of the programme, the objectives, the program logic and the series of collaboration among the participants through meetings and seminars made processes of development and change possible (see Farrell et al., 2021; Sjölund, 2024). In this collaborative work, EfS were initiated, got implemented, and at the end of the program some of the participating preschools showed examples of institutionalised sustainability.

### Promoting Sustainable Leadership in ECCE

There were almost 100 leaders of them around 75 principals, in the programme *Sustainable Preschools*. Their main task was being leaders of and organising the development work in the 200 participating preschools. The first year, they worked a lot with building the organisation, to make it possible for the preschool teachers to carry out their tasks. During the programme and supported by several lectures about a holistic and integrated approach, as the whole school approach (WSA), the leaders took on the task to include the whole preschool organisation in the reorientation towards sustainability. In terms of data, we asked the leaders to describe what decisions and actions they made during the programme to support the transformative development towards sustainable preschools. As researchers, we wanted to explore what a sustainable leadership could be. The reorientation described to lean on building knowledge in the organisation about sustainability, to management and steering and different leadership actions for change. It was about what food to buy, structuring waste sorting and minimizing food waste, to minimize chemicals in material, toys and the environment and toxic plastic or other questions linked to staff, the buildings' maintenance, the consumption of water and electricity (Pramling & Pramling Samuelsson, 2025).

To achieve systematic change, there is a documented need for allocated time and conditions that support communication, reflections and collegial learning, e.g., in networks and other forms of groups. Transformative changes are supported by systematic and planned competence development and the possibility to reformulate the content and teaching the children on their level of understanding. Two principals wrote:

A preschool/organization where sustainability permeates everything: socially, ecologically and financially. A preschool/organization where every child gets to explore and experience learning every day that contributes to increased understanding of sustainability and where the children's voices are allowed to permeate a sustainable preschool.

The work with sustainability has given the unit a strong commitment with committed autonomous employees. It has

also created great job satisfaction and a desire to learn more.

We could also see effects from a presentation in the program by the researcher Arjen Wals about the whole school approach. WSA leans on a shared vision about sustainability at the school or preschool, that support reflections and collegial learning about issues on sustainability connected to equity, justice, and ecological sustainability and fits well into the structure of *Sustainable preschool* program. This approach was also present in the programme, where teachers and leaders related their themes and projects to the SDGs. Some participants describe that studying the Agenda 2030 was inspirational for concrete actions in preschool practice. Additionally, we were asked to give input about sustainability news from around the world. The WSA approach underlines collaboration between all involved participants, principals, preschool teachers and educational staff, and staff in kitchen and cleaning. One principal describes the whole school approach in a vision:

To be a leading preschool in sustainable development, where every child can grow and develop in an environment that promotes respect for nature, society and the future. Eco-friendly buildings, sustainable food, contact with nature. Inclusive and fair environment. Health and well-being, Participation and influence. Efficient use of resources. Long-term planning. Cooperation and partnership.

As shown above, the sustainable leadership is firstly built on knowledge of the objectives, here education for sustainability, secondly on the willingness to make change by developing a vision of a sustainable preschool, and thirdly to make leadership actions by developing an organisation and structures within the municipality/organisation. Actions identified were different staff meetings and networks where all involved staff had time to work in collaboration with others to reflect upon their own practice and what transformative steps need to be taken. The structure of the programme *Sustainable Preschools* made it possible to develop knowledge, competences and skills that made the change possible (see Mathie & Wals, 2022; Mogren & Gericke, 2017a, 2017b).

### **New knowledge about EfS**

Earlier research on EfS show the significance of knowledgeable teachers (Davis et al., 2024). As a base-line input to the programme, we sent an online questionnaire to all participating preschool teachers (n=200). The intention with the questionnaire was twofold, firstly to collect the teachers' views on how they had perceived the new tasks in the revised National Curriculum for the Preschool (National Agency for Education, 2019) about sustainable development. Secondly, to *explore* the teacher's knowledge base, for the further planning of the research and the development programme. Four questions addressed if and how the teachers had implemented Education for Sustainable Development (ESD), the concept used in the curriculum: 1) in the physical environment, 2) in the overall education, and 3) in their teaching, and 4) the reasons for why preschools should work with Education for sustainable development.

A critical content analysis showed a tendency to describe ESD as "business-as-usual", where this approach showed that ESD was not a new field, and that the teachers addressed sustainability issues before it became a compulsory task in 2019 (Engdahl, et al., 2021). At the same time, the teachers showed uncertainty how to understand the concept of sustainable development and asked for more knowledge. The teachers described few physical changes or pedagogical changes made after the revision of the national curriculum. There were remarkably few connections made to the UN Sustainable Development Goals (United Nations, 2015) and to the Covid 19 pandemic. A common trend when describing content and activities in relation to ESD was to divide the content in three areas, following the three dimensions of sustainability, environmental, social, and economic. Most changes in the environment seemed to be a result of priorities made in the larger organisation, e.g., deleting toxic plastic and recycling food waste. A few of the teachers described an education that included transformative change (see Engdahl et al., 2021).

The fourth question about motives for why preschools should work with EfS had a qualitative approach and was analysed within the framework of a critical theoretical perspective that examines cultural conceptions and understandings of social reality in a specific institutional socio-historical context. In the preschool teachers' descriptions, a wide range of motives appeared: To counteract unsustainable lifestyles; To follow the governing documents; To take responsibility for a sustainable present and future;

and To equip children for the future. Here follows some quotes from the teachers (Ärlemalm-Hagsér et al., 2023):

We cannot continue to live as we do. It is about making the children understand, creating experiences and carrying their knowledge with them when they become adults.

It is because we all have to gain an understanding of how important it is that we leave behind us a globe that the people who come after us can live on. A globe that is not polluted, a healthy ocean that is not fished out or filled with garbage and that the vital water is drinkable.

If our goal is for the children to be able to become citizens in a democratic society, we need to start early by strengthening the children's confidence in their own abilities, the feeling that I am listened to, that I have the opportunity to influence my everyday life and decisions that affect me and that I can listen to others and put myself into others' situations and thoughts.

The study also showed that the teachers asked for more knowledge on ECEfS. The development work and the tasks for the preschool teachers were designed to be performed during the daily work with children and addressed both teaching competences and skills and their own knowledge development and awareness about what sustainability may mean in preschool education.

### *Lectures and Group Discussions*

The demands for professional development were met by lectures and group discussions. The researchers, the steering group and the process leaders discussed and planned the content and presenters for the seminars for leaders and for all participants. This was done for each semester of the programme and could thus adapt to the wishes and requirements identified from participants. We researchers presented research, theories and tasks at all seminars. The participants were divided into stable working groups with representation from different municipalities and preschools. These groups were arenas for discussions both about given lectures and how the programme proceeded in their own preschool. The continuity of these groups enabled the expansive learning and guaranteed an openness for different experiences and examples from different municipalities and preschools (IFOUS, 2024).

Another method in the programme, introduced by us researchers, was communication and meta-reflections in local focus groups, with the participating local teachers. The talks focused on the ongoing theme/project work, and how they as teachers could see where the children were in their learning processes. They described that they could see that the children took on new routines and responsibilities, for example in connection with meals and waste sorting. Another aspect of children's learning became visible as the teachers discussed the parents' comments on sustainability issues at home. The parents claimed that children saw themselves as stewards of the planet and applied their knowledge in different situations as home. The preschool teachers talked about themselves as being more active in communications, with more open questions to the children. The analysis of these focus group communications also showed that children were involved in the work, in ways that were seen as relevant, understandable and meaningful to them. A working method emerged where children and teachers created the education together, exploring an area from different angles and with the opportunity to express themselves in different ways (Carlsson, 2024).

Furthermore, on the municipal level, the local process leaders organised different seminars, networks, and pedagogical cafés where participants could discuss and reflect upon the programme activities (IFOUS, 2024). Many of the participants were also engaged in spreading ECEfS to colleagues in other preschools who were not directly participating in the IFOUS programme. The municipal managers planned for successive dissemination to more, or all, preschools to become sustainable preschools.

### *The OMEP Education for Sustainable Development Rating Scale*

To broaden the preschool teachers' understandings about what content could be relevant for young children, the *OMEP ESD Rating Scale* was introduced (L'Organisation Mondiale pour l'Éducation Pré-scolaire [OMEP], 2019, 2020) at the very beginning of the programme. The OMEP scale (see Siraj-Blatchford et al., 2016) was developed by a group of researchers from ten countries, inspired by the Early Childhood Environment Rating Scale - ECERS (Harms & Clifford, 1980). Both scales address quality

development in early childhood education. The Swedish version of the OMEP scale was developed in close relation to the values and goals of the National Curriculum for the Preschool. It includes 15 content areas, five to each of the three dimensions of sustainability, social/cultural, economic, and environmental. The OMEP scale broadens the perspective and makes teachers aware of what sustainability could be about in a preschool. The preschool teachers in the programme firstly evaluated their practice individually, by a self-evaluation. In a second step, the work team discussed their individual ratings and then negotiated a joint rating for their team. In a third step, the ratings from all preschool teams were discussed by the principals and their staff. The OMEP scale was well received and became an important and recurrent tool for professional development that made the teachers discover and reflect upon their own practice.

To evaluate the process with the OMEP scale we, the researchers, asked the participating preschool teachers to answer the following questions: Which areas did you rate highest in your preschool? Which areas did you rate lowest in your preschool? and Why? (Engdahl et al., 2024). The response rate of 81.5% was satisfactory. From the analysis of the data, three content areas stood out; *Budgeting and money* was rated low by 140 teachers, *Representations in books, toys, pictures, etc* was rated high by 110 teachers, and *The natural world* was rated high by 99 teachers. These ratings were followed by many examples, such as teachers stating they did not include children in any economic decisions, especially if working with infants and toddlers. On the other hand, the teachers reported an active approach to promote inclusive and democratic values and to counteract discriminatory attitudes and behaviour, which were related to the UN Convention on the rights of the child (United Nations, 1989).

At the end of the programme in 2024, a new assessment was carried out using the OMEP ESD Rating Scale. It showed a deeper and somewhat different focus of the EfS in the participating preschools. Actions were primarily introduced related to the economic dimension, and here most changes occurred, with one reservation. It was still common not to cover the area *Budgeting and money* in the teaching. Many themes and projects within the social dimension were now related to the area of *Collaboration with the surrounding society*, an area that, probably due to the ongoing pandemic, was rated low at the beginning of the programme. However, some teachers wrote that they had not given priority to the wider world, including global issues. One factor that may have influenced these responses was that about half of the responses came from preschool teachers working with the youngest children (1–3 years). Regarding the environmental dimension, the answers indicated that the preschool teachers were satisfied with the teaching in areas that have to do with nature and the environment. The value of evaluating education and teaching for sustainability using the OMEP scale was described as follows by one participant (IFOUS, 2024):

The assessment has also been rewarding as we got a picture of what we do but also what we need to develop. It has made us challenge ourselves in the subjects that we thought were a little difficult, it has also led to development and learning for me, my colleagues, the children and the entire preschool and also outside the preschool.

Here teachers gave examples of how they changed their practice. The OMEP scale helped develop a professional language around EfS and enabled an awareness of good things they do that should continue, but also what was unsustainable and should stop. Additionally, the ratings were helpful in indicating in what areas actions were necessary.

### **Communication is Important for Transformative Education**

Earlier in this article we saw how communication, meta-reflections and collegial learning was important for the management leaders, the principals, and the local process leaders to develop new knowledge, competences and skills in relation to EfS among the preschool staff, and in this section, we specifically focus on teachers and children. Communication between teachers and children can take place in many different ways. The importance of approaching children's world of experience and their perspectives was highlighted in several tasks during the three-year programme. This approach was also beneficial in providing conditions for child participation. The only way to find out what children have learnt is to get them to express their own ideas. In this view, teaching, learning and evaluation are about getting close to the children, to listen actively when children talk about their experiences, perspectives and share their ideas.

Teachers need to be skilful in taking children's perspectives in communication. Without skills in understanding the child, it is hard for the teacher to know how to challenge the child. Knowledge of and competence in dialogic communication and communication with open questions with children are fundamental to gain insight into the children's world and thoughts about a sustainable present and future – dialogic and open communication in this article. As we know from earlier research (Björklund & Pramling Samuelsson, 2022; Pramling & Pramling Samuelsson, 2012) and theories of today (Sommer et al., 2010; Vygotsky, 1978), communication is one of the most important means for children's learning and development. We also know from research that teachers' talk with children is mostly instructive, and very little talk is as dialogues. Teachers talk a lot, but listen less (Jonsson & Williams, 2013; Siraj-Blatchford, 2007).

The importance of approaching children's world of experience and their perspectives was highlighted in several tasks during the three-year programme. This approach was also beneficial in providing conditions for child participation. The different tasks for teachers were planned for everyday education, where play, art, and communication were arenas for teachers to engage in, to approach children's perspectives, and for challenging the children's ideas during play.

All kinds of play are important to use in early years' education, since play in a way is children's world, where they feel at home, and free to act. Also, in this programme on EfS, the central aspect of children's play became essential. We brought in the specific theoretical approach play-responsive teaching, which states that teachers should be part of children's play. A precondition for this is to learn from children about their play, where children move between fantasy (imagination) and reality (culturally accepted knowledge). This means to alter between "as is" (reality) and "as if" (imagination) also for the teacher, to be part of this process in communication. Additionally, the teacher may use alterity (to introduce new aspects), and challenge children in their play and communication for instance by adding new perspectives and by introducing a "what if ..." challenge (Pramling et al., 2019; Pramling & Pramling Samuelsson, 2025). This kind of play and communication activates children's agency to take initiatives and actively use their fantasy and ideas, and on the same premises as adults.

### **Different Kinds of Child Talks to Strengthen Communication**

The preschool teachers got several tasks to talk with the children using open questions to invite the children to the conversations. We were interested in finding out as much as possible about the children's perspectives and understandings about sustainability through the conversations. The preschool teachers were asked to follow up and challenge the children through open-ended questions. In 2022, the teachers got the task of carrying out *systematic child talks* with the children about a recent theme/project, related to sustainable development. The teachers recorded, transcribed and uploaded three of the talks on the secure university website, which became our research data. The task meant having a dialogue with the children, individually or in small groups, to find out how they had understood/made sense of something they had worked with during the project related to sustainability. The result showed various ways in which the 200 preschool teachers carried out systematic talks with children in preschool. Using content analysis, three different approaches were identified on how teachers communicate with children systematically about various content related to sustainability: 1) Joint creation of meaning, 2) Question and answer, focusing on remembering facts, and 3) Following the children. There was a large variation in the teachers' communicative competences. A key factor seemed to be to create a shared inter-subjective atmosphere, while at the same time being open for alterity, that is introducing new or slightly changed perspectives for the dialogue to deepen and continue (Engdahl et al., 2023).

A phenomenographic analysis of 60 comments about the task to do systematic child talks revealed that the task for some of the preschool teachers led to deepening their reflection and their awareness of talking with the children about aspects of sustainability. At the same time, several difficulties were highlighted regarding the task itself and how to ask questions and maintain children's interests during the conversations. Finally, the study gave indications that systematic child talks as a working method was not common in the participating preschools. Several preschool teachers pointed out that they did not talk with

children in this way in their everyday practise at the preschool (Pramling Samuelsson, et al., 2024). However, over time with the different tasks about child talks, most teachers described child talks as a successful method.

In the fall of 2023, another task related to communication was carried out, which involved talking with children about how the content of books related to sustainability issues. In total, the preschool teachers transcribed 157 *book conversations* that took place between preschool teachers and individual children or small groups of children. The preschool teachers used 107 different books, which indicates that they had absorbed the message that you can focus on sustainability issues in most contexts and regardless of what the book is about. The analysis of the teacher transcribed texts showed three different content areas that were communicated in the book talks: 1) relationships between people, i.e. how people behave towards each other, 2) relationships between people and nature, for example how people cause destruction in nature by throwing things away or by not taking care of animals and nature, and 3) relationship between people and the surrounding society, i.e. how to influence society and the surrounding world towards transformation for sustainability, and how different local and global aspects of the world are related to each other (Pramling Samuelsson, et al., 2026).

A difference was identified linked to the children's age. About half of the conversations with 1–3-year-olds were about relationships between people, while about half of the conversations with the older preschoolers, 3–5 years old, were about the relationships between humans and nature. A third of the conversations with the oldest children were about the relationships between people and society (Pramling Samuelsson et al., 2026). Two years into the programme, most preschool teachers adopted a relational and dialogic perspective in the communications. It was no longer about, for example, nature or the society per se, but how we humans are involved in what is happening. In the book conversations, we also saw examples of preschool teachers being inspired by play-responsive teaching by sometimes using the term "what if ..." in the book discussions, thus supporting fantasy, non-linear thinking and opening for new ideas and new ways of thinking.

A third task initiated a round of child talks around some images that were provided by us researchers. The conversations were recorded, transcribed and uploaded by the preschool teachers. The question we as researchers asked in the analyses was: What do children say about different aspects of sustainability in communication with their preschool teachers when they look at the images? The result was based on analyses of 580 conversations with children aged 4–6 years (Pramling Samuelsson & Engdahl, under review) and showed that children had developed knowledge about different dimensions of sustainability. Image 1 below focuses on a meeting where children were asked what they could decide upon together, since democracy is one important aspect of the social dimension of sustainability. The children came up with lots of things they could decide about, and then the teacher asked, how would the children go about coming to a joint agreement.

**Image 1**

*A Meeting for Decision-Making (Anna-Karin Engberg)*



After analysing talks related to the social dimension, we can state that children knew how to act

when you make decisions, you vote. The children were solution-oriented in their dialogues and showed examples of knowledge and awareness, as shown in the following examples:

Child 1: We use bricks to show the number of votes.

Child 2: You can see which gets the most votes.

But often, the children were not satisfied with this form of decision by the majority. They saw it as more democratic to follow the decision once, but the next time, they wanted to implement the proposal that lost in the voting. That way everyone could feel satisfied!

B: Today we can go to the park and tomorrow we can go to the forest.

The children, however, also expressed how important it was for each and every one to make their own decisions, and by that be aware of their own wishes and thoughts. By open questions children felt free to express their ideas. And we here claim that almost all children were aware of this democratic cuddle as a social aspect of sustainability. Another aspect linked to the environmental dimension of EfS become clear when the teacher and children talked about Image 2 below.

**Image 2**

*Throwing Litter in Nature (Anna-Karin Engberg)*



All children knew that you shouldn't throw litter in nature because it harms both animals and people. Litter destroys both humans and animals, and basically every child was aware of that we humans are the ones who throw away the litter. The children said that it's the adults who litter, someone referred to teenagers, but it was never the children because 'they know not to litter'.

Some other examples:

Teacher: Is there anything else that could happen?

Child 1: Yes, that people will die because we will not get any oxygen if trees do not grow.

Child 2: The turtle can get stuck and then it is the humans' fault.

In the task of communicating with children about designed pictures for different aspects of sustainability, of which we here have seen two different pictures above, we could summarise the results as: 1) Children have learnt a lot about sustainability during the project. All children know that one should not throw garbage in the nature, since it can hurt animals. 2) All children have ideas about democracy and coming to a joint decision. 3) All children know a lot about cultivation and growing conditions, although how many aspects of cultivating varied. 4) Most children have positive thought about not leaving anyone behind in play. 5) Many children also expressed thoughts about global questions (Prämling Samuelsson & Engdahl, under review.)

To support the preschool teacher that participated in the programme to deepening their professional skills in dialogic and open communication with children, they got several tasks, as described above, with

focus on to communicate with children on various objectives on sustainability. After we, the researchers, had received the transcribed texts we analysed the talks from different perspectives and at the next coming seminars we returned our findings as feedback the preschool teacher. We also created questions to the seminars, together with the steering group, for the preschool teacher discussions in their seminar group. They could reflect over the findings, the task, their handling of the task and children's experiences of and learning on the specific objectives on sustainability that was in focus for the specific communication task. This strategy was helpful for the preschool teacher, as in the beginning of the programme they said that they did not talk with children in this way in their everyday practise, but later in the programme, described dialogic and open communication as a successful method when working with sustainability issues with children (Engdahl et al, 2023; Pramling Samuelsson et al., 2024).

## Discussion

The aim of this article is to explore which factors that contributed in the programme *Sustainable Preschools* to the implementation of ECEfS. The purpose of the three-year programme was to strengthen the preschool's overall education for sustainable development, which was done via both research and professional development work. The research part of the programme had the objective to study how the teachers and their leaders produced new knowledge about professional development and children's learning related to EfS. The development and the research were intertwined and influenced each other (Ärlemalm-Hagsér et al., 2024). This thematic overview point at organization of collaboration between research and development may serve as a model for other initiatives to implement ECEfS (see also Farrell et al., 2021).

### Initiatives for Implementing ECEfS

The study was guided by two research questions. The first question asks what types of initiatives promote implementation of ECEfS in the programme? Firstly, one can claim that the conditions in terms of *curriculum guidelines are in place* in Sweden for changing practice toward sustainability (see Ärlemalm-Hagsér & Elliott, 2026). The National Curriculum for the Preschool state clear intentions and goals to strive for sustainability on broad basis (National Agency for Education, 2025). Curriculum is one aspect of developing a whole school approach. Secondly, the importance of developing *a strong collaboration between the academical world and practice* is evident (see Farrell et al, 2021). Here it should be noted that the initiative to this research and developmental programme came from practice. The leaders and teachers in the participating municipalities experienced a need to learn more about sustainability since it was included in the National Curriculum for the Preschool (National Agency for Education, 2019). Additionally, the municipalities/providers considered EfS as urgent and manifested this by integrating the costs of the programme into the regular budget and by appointing top management, principals, and teachers as participants.

Thirdly, another initiative was to decide on a *common structure and organisation of the programme*, the program objectives, a program logic and a vision. With eleven different independent partners (the municipals/private provider, the researchers and IFOUS), the strict meeting structure under the leadership of IFOUS was welcomed and helpful in addressing programme planning, issues, negotiations and for effective decision makings. As is shown in research about professional development, yet one more initiative is to make sure the structure (Sjölund, 2024) includes networking and group discussions for reflections and thinking forwards, preferably in continued groups, which enables expansive learning within the system. The solid structure in this large-scale educational research and development programme developed possibilities for development and enabled the 300 participants to develop knowledge and skills about education for sustainability in preschools. The structure included regular seminars for leaders, for all participants, during which ample time was scheduled for inputs in lectures in different areas connected to sustainability and leadership, by group work, discussions and reflections, and the tasks that the participants got to work with between the seminars.

Fourthly, the leaders, principals and preschool teachers, *inspired by the inputs in the programme and the tasks*, took on the task to reorientate the preschool education towards sustainability. The reorientation was linked to organisational aspects as making time and space for reflections and discussions among the staff about sustainability, where building structures for knowledge development and teaching skills in the organisation was deemed as necessary. Management changes addressed all aspects, as in what food to buy, structuring waste sorting, minimize chemicals at the preschool, the consumption of water and electricity. Collaboration with parents, principals and leaders in other preschools to make collaborative systems for sharing and reusing different material as furniture, clothes, other material and toys (Pramling & Pramling Samuelsson, 2025).

### **Strategic Decisions Promoting ECEfS**

The second research question was which *strategic decisions* can be identified that promote implementation of ECEfS in the organisation? Here, a strategic, initial questionnaire to all participating teachers identified a need for more knowledge about sustainable development and EfS. With an initial mapping of EfS in the preschools, the participants may develop a competence baseline for further initiatives. It is important to recognize what knowledge the participants have when a programme like this begins.

The decision to introduce the OMEP ESD Rating Scale for all participating preschools, as a tool for expansive, multifaceted and transformative learning, was strategic. It opened the views of the broad and complex notion of EfS. The influence of the scale may be due to the fact, that every individual first has to rate their own practice, and in the next step discuss each rating with their colleagues. The task is to try to come to an agreement about their joint practice. This is followed by finding out what parts of their teaching that is good, what parts need to stop, and what parts they perceive they need to develop around sustainability. The OMEP scale proved to be the entire most influential tool, which enabled the teachers to recognize that EfS is more than environmental questions and to identify a lot of things they already do that could easily be turned towards EfS. The OMEP scale became a recurrent tool in the programme. Most municipalities decided that all their preschools should use the OMEP-scale as an introduction to EfS, not only the preschools that participated in the programme.

During the programme, parallel to the Sustainable Preschools programme, one of the researchers was involved in building an App - the online course *Sustainability from the Start* (edChild et al., 2024). The app was based on some of the knowledge generated in this programme. It includes knowledge dissemination, questions for reflection and discussion, and many activities for EfS with young children. The course and the App were launched during the last year of Sustainable Preschools. It was well received, and new participants in the programme (some of the participants changed over time) used the app to enrich their knowledge about EfS. Thanks to co-funding by the European Union, the App can be downloaded for free via the app ECE Academy on teachers' smart phones and is another useful pedagogical tool to support professional development in preschools with focus on ECEfS.

A third strategic decision was to introduce various tasks about communication for developing the teachers' professional skills in systematic child talks. All new theories about influencing children's learning are related to communication, that is why child talks are a must in this kind of programme. However, it is not only a question about communication in general, but open dialogues where there is openness, every child's perspective, room for creativity, and challenges. Challenges can be anchored both in reflections about present problems and dilemmas, and the opposite, to imagine a future by pondering about 'What if?' questions (Pramling & Pramling Samuelsson, 2025). In this way, communication, play and learning are an intertwined process.

### **Conclusion**

In the programme *Sustainable preschools*—we can see several factors that contributed to the implementation of ECEfS in the participating preschools. Firstly, the organisation and structures of the program as a whole, built possibilities for a long-term collaboration among the participants. An important

standpoint was that all participants had equal responsibility, in collaboration, to develop new knowledge, competences and skills about ECEfS. Interrelationships between different levels and partners in the municipalities, learning together and with support of each other's competences and engagement were intertwined with research and the tasks in the programme. As Farrell et al. (2021, p. iv) describe a research-practice partnership in education as "the joint work for educational improvement or equitable transformation".

Secondly, to make the transformative change happen in the preschools, the management leaders, the principals and the process leaders played a crucial role, as proactive leaders (see also Borg & Vinterek, 2020; Mogren & Gericke, 2017a, 2017b).-The theory of the three phases proposed by Forssten Seiser et al. (2021), the initiate phase, implementation phase, and the institutionalisation phase-has permeated the work in the programme. It was facilitating an understanding that put the new knowledge and new structures into practice, in a collective journey through the zone of proximal development to learn something "that is not yet there" (Engeström & Sannino, 2010; Vygotsky, 1978).

As we wrote before, the results from the Sustainable Preschool programme showed a leadership for sustainability described as transformative and relational, where sustainability in everyday life is organised as collectively and culturally embedded in the work of preschool principals, preschool teachers, children and families together, for a sustainable life and sustainable future. At the preschools, the organisational culture had changed towards a common *this is how we do things around here*, while at the same time there was an understanding of further steps to take along the way towards holistically sustainable preschools.

The process in the programme, was in some steps not so easy, and several dilemmas, resistance and struggle were notable in parts of the programme (see for example Sjölund & Lindvall; 2024; Wals et al., 2024). In the beginning, the participants saw us researchers as experts and asked for advice on how to work and what themes they should work with. Our answer was that they have to use their experiences from their practices which made some of them frustrated. In the steering group, there was sometimes conflicting ideas in the planning of the programme. However, these differences of opinion were mostly solved by an open discussion among the participants in the group, led by the IFOUS leader. Another example of a dilemma was in the middle of the programme when a finding from a task started a discussion about whether the participants were subjects or objects in the research. Such dilemmas created energy and facilitated in fact progress in the programme and in the end, it made the collaboration between different partners and levels stronger. The dilemmas highlighted the need for more transparent information, and ongoing discussions and reflections became more visible. As research has shown (Sjölund, 2024; Sjölund & Lindvall, 2024), the structure in the research and development programme developed both boundaries and possibilities for development.

A final comment, we are living in challenging times, ecologically, socially, politically, and economically. It is a time with an urgent need for transformation that requires new and sustainable ways of living (IPCC, 2023; UNESCO, 2022a). Young children are the most exposed to these global challenges, and the ones who will live in the future. Early Childhood Education must play a pivotal role in addressing these global challenges and invite children to transformative and transactional education for a sustainable future. Re-orienting all education towards sustainability is a major task – and this article describes a model for transformative and transactional change towards sustainable preschools.

## Declarations

### *Authors' Declarations*

**Acknowledgements:** Thanks to all participants in the research and development programme Sustainable Preschools.

**Authors' contributions:** All three authors have worked with all parts of this article.

**Competing interests:** The authors declare that they have no competing interests.

**Funding:** The programme was co-founded by the participating municipalities: Hässleholm, Stockholm, Strängnäs, Örebro, Österåker and the private provider Pysslingen.

**Ethics approval and consent to participate:** The research part is approved by The Ethic Commission in Sweden (dnr 2021-06472.01).

#### **Publisher's Declarations**

**Editorial Acknowledgement:** The editorial process of this article was completed under the editorship of Dr. Mehmet Toran through a double-blind peer review with external reviewers.

**Publisher's Note:** Journal of Childhood, Education & Society remains neutral with regard to jurisdictional claims in published maps and institutional affiliation.

#### **References**

- Ärlemalm-Hagsér, E. (2022). Förskolans utbildning i antropocen [Early childhood education in the anthropocene]. *Pedagogisk Forskning i Sverige*, 27(3), 96–117.
- Ärlemalm-Hagsér, E., & Elliott, S. (2026). Whole-centre approaches in ECEfS: Time for transformative leadership and change. In F. Dovigo & S. Alici (Eds.), *Promoting transformative practices for sustainability in early childhood education and care: Cultivating critical, participatory, and emancipatory approaches* (pp. 65–86). Routledge.
- Ärlemalm-Hagsér, E., Engdahl, I., & Pramling Samuelsson, I. (2023). Förskollärares mångfasetterade motiv för undervisning om hållbarhet [Preschool teachers multi-faceted motives for teaching sustainability]. *Nordisk Barnehageforskning*, 19(3), 104–124. <https://doi.org/10.23865/nbf.v19.345>
- Ärlemalm-Hagsér, E., Engdahl, I., & Pramling Samuelsson, I. (2024). Hållbar förskola ur ett forskningsperspektiv [Sustainable preschools from a research perspective]. In IFOUS, *Små steg: Stora avtryck* (pp. 15–26). <https://IFOUS.se/hallbar-forskola/>
- Bertram, T., Pascal, C., Lyndon, H., Formosinho, J., Gaywood, D., Gray, C., Koutoulas, J., Loizou, E., Vandenbroek, M., Whalley, M. (2024). EECERA ethical code for early childhood researchers. *European Early Childhood Education Research Journal*, 33(1), 4–18. <https://doi.org/10.1080/1350293X.2024.2445361>
- Björklund, C. & Pramling Samuelsson, I. (2022). Children's perspectives informing theories and Nordic preschool practice. In N. Veraksa & I. Pramling Samuelsson (Eds.), *Piaget and Vygotsky in XXI century: dialogue on education* (pp. 87–107). Springer.
- Borg, F., & Vinterek, M. (2020). Principals' views on and descriptions of preschool education for sustainable development. *Journal of Applied Technical and Educational Sciences*, 10(2), 18–40. <https://doi.org/10.24368/jates.v10i2.170>
- Borg, F., Pramling Samuelsson, I., & Gericke, N. (2024). Developing a whole (pre)school approach to sustainability: Insights from global citizenship and early childhood education across Nordic countries. In Arjen E. J. Wals, B. Bjonness, A. Sinnes, & E. Ingrid (Eds.), *Whole school approaches to sustainability: Education renewal in times of distress* (pp. 167–175). Springer Nature. <https://doi.org/10.1007/978-3-031-56172-6>
- Braun, V., Clarke, V., Hayfield, N. & Terry, G. (2019). Thematic analyses. In P. Liamputtong (Ed.), *Handbook of research methods in health and social sciences* (pp. 843–860). Springer.
- Caiman, C., Hedefalk, M., & Ottander, C. (2022). Pre-school teaching for creative processes in education for sustainable development – invisible animal traces, purple hands, and an elk container. *Environmental Education Research*, 28(3), 457–475. <https://doi.org/10.1080/13504622.2021.2012130>
- Carlsson, L. (2024). *Delaktighet och meningsfullhet: En studie om barns och förskollärares tal om förskolans arbete med hållbarhet*. (Master thesis in Child and youth studies). University of Gothenburg.
- Davis, J., Elliott, S., & Ärlemalm-Hagsér, E. (2024). *Early childhood education for sustainability: A short history*. Springer.
- edChild, OMEP in Croatia, Czech Republic, France, Ireland, Sweden, & Kristianstad University. (2024). *Sustainability from the start* (ECE Academy). OER Commons. <https://www.edchild.com>
- Engdahl, I., Pramling Samuelsson, I. & Ärlemalm-Hagsér, E. (2023). Systematic child talks in early childhood education: A method for sustainability. *Children*, 10(4), 661. <https://doi.org/10.3390/children10040661>
- Engdahl, I., Pramling Samuelsson, I., & Ärlemalm-Hagsér, E. (2021). Swedish teachers in the process of implementing education for sustainability in early childhood education. *New Ideas in Child and Educational Psychology*, 1(1), 3–23. <https://nicepj.ru/articles/article/1625/>
- Engdahl, I., Pramling Samuelsson, I., & Ärlemalm-Hagsér, E. (2024). How preschool education in Sweden contributes to cultures for sustainability: Rights and Equity at the core of ECEfS? In J. M. Davis & S. Elliott (Eds.), *Young children & the environment: Early education for sustainability* (3 ed., pp. 255–273). Cambridge.
- Engeström, Y., & Sannino, A. (2010). Studies of expansive learning: Foundations, findings and future challenges. *Educational Research Review*, 5(1), 1–24.
- Farrell, C., Penuel, W., Coburn, C., Daniel, J., & Steup, L. (2021). *Research-practice partnerships in education: The state of the field*. William T. Grant Foundation.
- Forssten Seiser, A., Mogren, A., Gericke, N., Berglund, T., & Olsson, D. (2023). Developing school leading guidelines facilitating a

- whole school approach to education for sustainable development. *Environmental Education Research*, 29(5), 783–805. <https://doi.org/10.1080/13504622.2022.2151980>
- Harms, T., & Clifford, R. (1980). *The Early Childhood Environment Rating Scale*. Teachers College Press.
- Hedefalk, M., Almqvist, J., & Östman, L. (2015). Education for sustainable development in early childhood education: A review of the research literature. *Environmental Education Research*, 21(7), 975–990. <https://doi.org/10.1080/13504622.2014.971716>
- Hirsh, Å., Liljenberg, M., & Jahnke, A. (2024). Systematisk FoU-samverkan som expansivt lärande [Systematic R&D-collaboration as expansive learning]. In IFOUS, *Fokus undervisning* [Teaching in focus], (IFOUS report 2024:1, pp. 15–36).
- Innovation, Forskning och Utveckling i Skola Och Förskola [IFOUS]. (2021). Plan för forskning- och utvecklingsprogrammet: Hållbar förskola [Plan for the research and development programme: Sustainable preschools]. IFOUS. <https://ifous.se/hallbar-forskola/>
- Innovation, Forskning och Utveckling i Skola Och Förskola [IFOUS]. (2024). *Hållbar förskola: Små steg – stora avtryck* [Sustainable preschools: Small steps – large imprints]. IFOUS. <https://ifous.se/hallbar-forskola/>
- IPCC. (2023). *AR6 Synthesis report: Climate change 2023*. <https://www.ipcc.ch/report/sixth-assessment-report-cycle/>
- Jonsson, A., & Williams, P. (2013). Communication with young children in preschool: The complex matter of a child perspective. *Early Child Development and Care*, 183(5), 589–604.
- Malone, K. (2016). Reconsidering children’s encounters with nature and place using posthumanism. *Australian Journal of Environmental Education*, 32(1), 1–15.
- Mathie, R. G. & Wals, A.E.J. (2022). *Whole school approaches to sustainability: Exemplary practices from around the world*. Wageningen: Education & Learning Sciences/Wageningen University. <https://doi.org/10.18174/572267>
- Mogren, A., & Gericke, N. (2017a). ESD implementation at the school organization level: Part 1 investigating the quality criteria guiding school leaders’ work at recognized ESD schools. *Environmental Education Research*, 23(7), 972–992. <https://doi.org/10.1080/13504622.2016.1226265>
- Mogren, A., & Gericke, N. (2017b). ESD implementation at the school organization level: Part 2 investigating the transformative perspective in school leaders’ quality strategies at ESD schools. *Environmental Education Research*, 23(7), 993–1014. <https://doi.org/10.1080/13504622.2016.1226266>
- National Agency for Education. (2019). *Curriculum for the preschool: Lpfö 18*. National Agency for Education. <https://www.skolverket.se/publikationer?id=4049>
- OMEP. (2019). *The OMEP ESD rating scale* (2<sup>nd</sup> ed.). <https://omepworld.org/education-3/>
- OMEP. (2020). *OMEP:s skala för hållbarhet i förskolan*. Svenska OMEP. <http://omep.org.se/h%C3%A5llbar-utveckling/skalan>
- Pramling Samuelsson, I., & Engdahl, I. (Under review). Recognising children’s views in a child-centered pedagogy towards sustainability.
- Pramling Samuelsson, I., Engdahl, I., & Ärlemalm-Hagsér, E. (2024). Att genomföra systematiska barnsamtal: Till nytta för hållbarhet i förskolan [Doing systematic child talks: Benefitting sustainability in preschools]. *Educare*, (2), 84–106. <https://doi.org/10.24834/educare.2024.2.889>
- Pramling Samuelsson, I., Engdal, I., & Ärlemalm-Hagsér, E. (2026). Boksamtal som arbetssätt för förskolebarns lärande om hållbarhet [Book talk as a method for preschool children’s learning about sustainability] *Forskul*, 14 (online, december 2025). <https://publicera.kb.se/forskul/article/view/25666?articlesBySimilarityPage=3>
- Pramling, N., & Pramling Samuelsson, I. (2025). Engaging children in what-if thinking through read-aloud conversations in early childhood education for sustainability. *European Early Childhood Education Research Journal*, 33(2), 211–222. <https://doi.org/10.1080/1350293X.2024.2437760>
- Pramling, N., & Pramling Samuelsson, I. (Eds.). (2012). *Educational encounters: Nordic Studies in Early Childhood Didactics*. Springer.
- Pramling, N., Wallerstedt, C., Lagerlöf, P., Björklund, C., Kultti, A., Palmér, H., Magnusson, M., Thulin, S., Jonsson, A., & Pramling Samuelsson, I. (2019). *Play-responsive teaching in early childhood education*. Springer. <https://link.springer.com/book/10.1007%2F978-3-030-15958-0>
- National Agency for Education. (2019). *National curriculum for the preschool Lpfö 18*. National Agency for Education. <https://www.skolverket.se/publikationer?id=4049>
- Ritchie, J. (2014). Learning from the wisdom of elders. In J. Davis & S. Elliott (Eds.), *Research in early childhood education for sustainability: International perspectives and provocations* (pp. 36–49). Routledge.
- Siraj-Blatchford, I. (2007). Creativity, communication and collaboration: The identification of pedagogic progression in sustained shared thinking. *Asia-Pacific Journal of Research in Early Childhood Education*, 1(2), 3–23.
- Siraj-Blatchford, J., Mogharreban, C., & Park, E. (Eds.). (2016). *International research on education for sustainable development in early*

- childhood. Springer. <https://doi.org/10.1007/978-3-319-42208-4>
- Sjölund, S. (2024). *Conceptualising the boundary infrastructure of research-practice partnerships* [Unpublished Dissertation]. Mälardalen University.
- Sjölund, S., & Lindvall, J. (2024). Examining boundaries in a large-scale educational research-practice partnership. *Journal of Educational Change*, 25, 417–443. <https://doi.org/10.1007/s10833-023-09498-2>
- Sommer, D., Pramling Samuelsson, I. & Hundeide, K. (2010). *Child perspectives and children's perspectives in theory and practice*. Springer.
- Stavholm, E. (2024). *Teacher professional learning in response to contemporary challenges in early childhood education and care* [Doctoral dissertation]. University of Gothenburg.
- Swedish Research Council. (2024). *Good research practice*. Swedish Research Council. <https://www.vr.se/english/analysis/reports/our-reports/2025-07-03-good-research-practice-2024.html>
- Taylor, A. (2017). Beyond stewardship: Common world pedagogies for the Anthropocene. *Environmental Education Research*, 23(10), 1448–1461. <https://doi.org/10.1080/13504622.2017.1325452>
- United Nations. (1989). *Convention on the rights of the child*. <https://www.ohchr.org/en/professionalinterest/pages/crc.aspx>
- United Nations. (2015). *Transforming our world: The 2030 agenda for sustainable development*. <https://sustainabledevelopment.un.org/post2015/transformingourworld>
- UNESCO. (2022a). *Transforming education for the future*. Education 2030. <https://unesdoc.unesco.org/ark:/48223/pf0000382765>
- UNESCO. (2022b). *The Tashkent declaration and commitments to action for transforming early childhood care and education*. <https://www.unesco.org/sites/default/files/medias/fichiers/2022/11/tashkent-declaration-ecce-2022.pdf>
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. (Ed. by M. Cole, V. John-Steiner, S. Scribner & E. Souberman). Harvard University Press.
- Wals, A., Bjørnness, B., Sinnes, A., & Eikland, I. (2024). *Whole school approach to sustainability*. Springer. <https://doi.org/10.1007/978-3-031-56172-6>

# Assessment in early childhood education: Micro-regimes perspective

Maiju Paananen<sup>1</sup>, Eerika Lämsmans<sup>2</sup>, Eija Räikkönen<sup>3</sup>

**Abstract:** The research literature on assessment policies in ECEC typically differentiates performative assessment regimes affected by neoliberal reforms, and social democratic assessment regime that highlights a holistic approach and democratic and local decision making concerning the focus of assessment. It has been suggested that this dichotomy between Anglo-Saxon and Nordic models may be a discursive tool created by authors from within the English language context to critique their own context rather than a description of actual practices. To shed more light on this scholarly discussion, this article introduces a concept 'micro-regime of assessment' to refer to a set of rules, practices, or arrangements related to assessment at a small or localised level, rather than at a broad national or international level. In particular, we ask what kinds of micro-regimes of assessment we can identify in ECEC in Finland and what kinds of interlinkages we can find between the background characteristics of ECEC teachers and micro-regimes of assessment. Assessment practices that teachers used were measured using an online questionnaire. The sample of this study consists of 1,194 participants from 834 ECEC centres. By using latent profile analysis, we identify four micro-regimes of assessment that are 1) technocratic-enthusiast, 2) fragmented, 3) enabling and 4) conflicted regimes. By using multinomial logistic regression analysis, we show how work experience and education were connected to the likelihood of micro-regime membership. In sum, the variation in assessment regimes relates to the aim of assessment, institutional arrangements for governing, and the kind of epistemic community that is involved in evaluation processes. The variation occurs at both the national and local levels. Our evaluative mindsets and the ways in which people make evaluation fit into local traditions, practices, and beliefs seem to emerge as part of local regimes.

## Article History

Received: 07 May 2025

Accepted: 24 January 2026

## Keywords

Evaluation regimes;  
Datafication; Cultures of  
assessment; Governance in early  
childhood education

## Introduction

In this article, we will introduce a concept *micro-regime of assessment*. By micro-regimes of assessment, we refer to a set of rules, practices, or arrangements related to assessment at a smaller or more localized level, rather than at the broader national or international level. We live surrounded by evaluation and assessment: we assess the life events of our friends by reacting their social media post with heart symbols and are asked to assess customer service experiences by filling online surveys. Professor Peter Dahler-Larsen (2012) has called this the 'Evaluation Society'. Evaluation and assessment that relates to it have, however, been part of educational institutions as long as they have existed. Likewise, in early childhood education and care (ECEC), that is at the focus of this study, measuring and weighting children, and monitoring their development are not new phenomena by any means. Yet, it seems that the focus on assessment has intensified: assessment, and evaluation based on it, has been increasingly used in steering educational systems, and teachers', students', and children's daily lives. The intensification may indicate a *kairos*, a window of time during which assessment policies are most likely to take new shapes. This is why it is important that the way in which we approach assessment policies in research is revisited.

<sup>1</sup> Tampere University, Faculty of Education and Culture, Tampere, Finland, e-mail: [maiju.paananen@tuni.fi](mailto:maiju.paananen@tuni.fi), ORCID: <https://orcid.org/0000-0002-1072-1923>

<sup>2</sup> Tampere University, Faculty of Education and Culture, Tampere, Finland, e-mail: [eerika.lansmans@tuni.fi](mailto:eerika.lansmans@tuni.fi), ORCID: <https://orcid.org/0009-0007-5601-0979>

<sup>3</sup> University of Jyväskylä, Faculty of Education and Psychology, Jyväskylä, Finland, e-mail: [eija.raikkonen@tuni.fi](mailto:eija.raikkonen@tuni.fi), ORCID: <https://orcid.org/0000-0003-4450-9178>

### Earlier Research on Assessment Cultures in ECEC

Earlier research has identified wider assessment cultures that vary across the globe. The variation relates to for instance, whether there are institutional arrangements in the governing bodies for conducting and disseminating evaluations, whether evaluations focus on inputs, outputs and/or outcomes, and what kind of epistemic community is involved in evaluation processes (Jacob et al., 2015). Additionally, variance in assessment practices reflects the contextual variance in the central aims of education. Education may prioritize obedience to authority, reclaiming indigenous knowledge, emphasis on building up human capital, or there may be a focus on critical thinking and civic engagement. Consequently, the central focus of assessment varies (Jacob et al., 2015).

Assessment cultures in public institutions are at least to some extent connected to wider political systems such as welfare regimes. Based on this notion, research has argued that we could differentiate performative and social democratic assessment regimes. For example, standardized testing has had a key role in evaluating ECEC in the United States (U.S.) (Bassok et al., 2016) and England (Roberts-Holmes & Bradbury, 2016) but not to the same extent in the Nordic countries. The focus on standardized testing, performance-based evaluation and the focus on assessing children's learning has been termed as a performative assessment regime. This relates to the conception of ECEC having a significant impact on children's development and later life, and further, human capital development at the societal level. The conviction is that through standardized testing it is possible to monitor the returns of educational investments as well as provide information for parents about the quality of ECEC services to enable informed decisions in a marketized ECEC system (Roberts-Holmes & Moss, 2021).

At the same time, pedagogical documentation of individual children and child groups, teacher autonomy and the ideal of democracy have been seen as key parts of evaluation in the social democratic evaluation culture that has been prevalent in the Nordic countries (Urban et al., 2023). The central focus is said to be on evaluation of the learning environment, pedagogical activities, and the organisation of ECEC (Urban et al., 2023). According to document analyses of evaluation policies and academic literature on evaluation in the Nordic countries, evaluation is portrayed as being based on common values such as well-being, child-centredness, play, and reducing inequalities (Urban et al., 2023).

Thus far, most of the examinations of evaluation cultures (e.g., Dahler-Larsen & Boodhoo, 2019; Furubo et al., 2002; Jacob et al., 2015) and evaluation regimes (Urban et al., 2023) have been conducted on the *national level* based on national documents and national expert views on assessment practices. Yet, much responsibility in making decisions concerning assessment practices in many countries is delegated to the local-level actors. Consequently, it is worth considering whether the distinction between performative and social-democratic assessment cultures oversimplifies the complexity of assessment practices. It has been suggested that the dichotomy can be seen as a discursive tool created by authors from the English-language context, for the purpose of critiquing their own context (Urban et al., 2023). This division may be thus better understood as a conceptual construct that helps understand the variation in micro-level practices. Local level assessment practices have indeed been reported to be characterized by arbitrariness: the actual practices are not always in line with the official policy formulations. For example, by using local assessment practices in ECEC in Finland, Siippainen et al. (2023) show how the origin of the local assessment practices and their objectives are not necessarily known by the key actors, and they are not always in line with practices typically related to the wider assessment regime. However, even though they are local practices, they are not independent of international, and national policies (Siippainen & Paananen, 2025). The term 'regime' denotes this premise.

### Earlier Research on Individual Assessment Styles

Earlier research on teacher-level assessment profiles will be helpful for understanding the arbitrariness of local assessment practices the earlier research has identified. The research on assessment profiles shows that the way in which teachers use assessment varies in terms of the perceived goals and focus of assessment, assessment practices, and perceived usefulness of assessment (Veldhuis & van den Heuvel-Panhuizen, 2014). For example, in a study conducted by Veldhuis and van den Heuvel-Panhuizen

(2014), the researchers identified four assessment profiles of mathematics teachers in the Netherlands: enthusiastic assessors, mainstream assessors, non-enthusiastic assessors and alternative assessors. Teaching experience and professional qualification relate to teachers' attribution to the assessment profile. The more experienced teachers were less enthusiastic assessors. Teachers who obtained their professional qualification from a teacher education college for primary school teachers were less likely to be alternative assessors, meaning that they were less likely to devise their own assessment practices, compared to ECEC teachers (Veldhuis & van den Heuvel-Panhuizen, 2014). In a similar person-centred study of teacher candidates' approaches to assessment, Coombs et al. (2020) identified eager, contemporary and hesitant assessors among teacher candidates in Ontario, Canada. Eager assessors were likely to endorse various approaches to assessment. Contemporary assessors endorsed assessment for and as learning, design and communication of assessments, and equitable and differentiated approaches to fairness. Hesitant assessors were unlikely to endorse any of the approaches to assessment. Younger teacher candidates were more likely to belong to contemporary assessors than hesitant assessors (Coombs et al., 2020). In addition, the grade level a teacher works with seems to have an influence on conceptions of assessment (Brown, 2004; Lui & Bonner, 2016). Teachers of higher grade levels are generally more accountability-orientated than teachers of lower grade levels (Bonner, 2016). We have very limited previous knowledge on assessment profiles in ECEC or how individual-level factors are connected to them.

In sum, examining assessment cultures or assessment regimes as national-level phenomenon hides the local level variation that has been identified in assessment profile studies (e.g., Veldhuis & van den Heuvel-Panhuizen, 2014). We therefore focus on micro-regimes of assessment rather than wider national evaluation cultures or merely individual assessment styles.

### **Bridging the Assessment Culture and Individual Style Approaches**

What contemporary research has been thus far missing, is bridging examinations of wider assessment regimes and varying teacher-level assessment profiles. This is needed, however, as in education, assessment is closely linked to governing as there is a triple bind between assessment, education and governing: 1) assessment is used for governing children's future positions in the society: it is needed to fulfil the education's function as a mean for social placement (Biesta, 2015), 2) assessment is often used as a basis for monitoring the returns of educational investments (Biesta, 2009) and 3) assessment practices in education are typically governed nationally and/or locally (e.g. Dahler-Larsen, 2012). Given the strong linkage between assessment and governing, and the contextual variation of the most central aims of education, it will be fruitful to examine, besides evaluation cultures, the assessment and evaluation regimes. Bridging these research discussions allows for the development of a more robust and context-sensitive understanding of assessment. We suggest that this will aid us to better explain the dynamics of assessment practices.

The micro-regime approach diverges from earlier studies examining assessment cultures that have conceptualized and operationalized the phenomena as a singular variable (even though it consisted of several categorical indicators). The conceptualization 'micro-regimes' directs the focus on multidimensional nature of assessment practices including the functions, objects, subjects and tools of assessment. This leads to approaching them as separate variables. Thus, we assume that the micro-regimes of assessment vary in terms of the objectives of assessment – whether the key focus of assessment is related to enhancing equity between children, their wellbeing, their learning, or showing compliance with regulations. We also assume that the micro-regimes of assessment might vary in terms of the intensity of external governance, and in terms of the epistemic community, meaning the network of participants involved in the assessment process (see e.g. Dahler-Larsen, 2021; Jacob et al., 2015).

Our overall aim is to examine whether ECEC teachers' assessment practices can be described by means of micro-regimes of assessment. In particular, we ask, 1) what kinds of micro-regimes of assessment we can identify and 2) what kinds of interlinkages we can find between the background characteristics of ECEC teachers and micro-regimes of assessment.

## Method

### Research Context

The research was carried out in Finland. In Finland, children start school at the age of seven. Every child under school age is entitled to ECEC, which is organized mostly as a public service by municipalities. Approximately 17% of children attending ECEC are enrolled in private ECEC services (Statistics Finland, 2025). Both private and public ECEC follow the National Core Curriculum of Early Childhood Education (Finnish National Agency for Education, 2022). National-level evaluations are carried out by the Finnish Education Evaluation Centre (FINEEC) (Act 582/2015), which are formative, enhancement-led, and sampling-based.

However, the Finnish ECEC system is decentralized and the ways of organizing ECEC services are in many respects decided locally. This means, for example, that even though municipalities have legal obligation to evaluate the ECEC services in their area, and publish the results, they have autonomy over how they carry out the evaluation. There are no national standards for assessment. Thus, assessment takes many forms. The only form of assessment that is mentioned in the national curriculum guidelines is pedagogical documentation, and it is indeed a prevalent practice (Lindh & Mansikka, 2023). Despite its prevalence, earlier research shows variation in the local assessment practices (Siippainen & Paananen, 2025).

### Ethics

According to ethical guidelines set by the Finnish National Board on Research Integrity (2019), no formal ethical approval was required for this study as it was based on voluntary participation, and posed no harm to participants. Before participating in the study, teachers were provided with information on the researchers, on the purpose, and on the content of the research. Teachers were given the choice to participate by agreeing to this information, or to decline participation. Additionally, they could quit the questionnaire at any moment and skip individual questions if they felt uncomfortable answering them. All participants voluntarily took part in the study and gave their informed consent. All survey data were stored on secure servers with access restricted to authorized research personnel. Prior to analysis, responses were anonymized by removing all personally identifiable information to ensure confidentiality and prevent re-identification.

### The Sample

The participants of this study were recruited by sending an e-mail invitation to each preschool in Finland, based on the contact details given in the national VARDA database that is maintained by the National Agency of Education. By preschool we mean an ECEC centre that typically caters to children from 10 months of age to the start of primary school at the age of seven. An online version of the questionnaire was sent to a contact person of each centre (usually the preschool director), altogether to 4,104 centres or centres' directors' e-mail addresses with the request to distribute the questionnaire to the preschool teachers in their centre. The sample consists of 1,194 participants in 834 ECEC centres. Most (96%) of the participants worked as ECEC teachers and the remaining four percent worked as special ECEC teachers. They mostly worked in urban municipalities (68%) and less frequently in densely populated municipalities (17%) or rural areas (14%). The age of participants ranged from 22 years to 66 years, with a mean of 45 years ( $SD = 11.00$ ). The teachers' work experience ranged from less than half a year to 42 years ( $M = 16.10$ ,  $SD = 11.20$ ).

### Instrument and Design

Micro-regimes of assessment were measured using an online questionnaire that consisted of 164 items pertaining to the teachers' background characteristics and assessment practices. In the study reported in this article, we used 78 items that measured teachers' conceptions of assessment practices concerning the ECEC environment, pedagogical practices and children's skills (Appendix 1). The questionnaire was loosely inspired by the Conceptions of Assessment Abridged (CoA-III-A) questionnaire (Brown, 2006),

which measures teachers' conceptions about four purposes of assessment: assessment holds schools accountable, assessment holds students accountable, assessment informs the improvement of education, and assessment is irrelevant. Also, the items used to capture assessment cultures developed by Furubo and colleagues (Furubo et al., 2002; Jacob et al., 2015) and assessment profiles (Veldhuis & van den Heuvel-Panhuizen, 2014) were used as inspiration. However, they were expanded and modified extensively to fit the context of the Nordic ECEC regime. For example, we did not include any items that would measure student accountability as it did not resonate with the Nordic assessment context. The questionnaire included questions with response options and open-ended items. A list of all original items can be found in the Appendix 1. Participants were instructed to answer the questionnaire keeping in mind the practices of the preschool they currently worked in.

To represent this large set of assessment practice variables more parsimoniously with fewer meaningful dimensions of assessment practices, we employed exploratory factor analysis (EFA) and exploratory structural equation modelling (ESEM). A detailed description of the analysis process can be found in Appendix 1. We found altogether nine teachers' assessment practice factors that could be categorised thematically under three themes. The first set of factors was grouped under the theme "The Purpose of the Assessment" and it covered three factors, which described the extent to which the teachers considered a) children's wellbeing and equality (13 items), b) children's learning and development (6 items), and c) accountability (8 items). The theme of the second set of factors was "Participants of the Assessment". We found two factors which described the extent to which d) parents and children were involved in assessments (6 items) and e) external partners involvement (3 items). Finally, under the third theme, "The Assessment Policies" we included four factors related to the f) level of systematization in assessment practices, meaning how frequent and planned assessment practices were (7 items), g) autonomy of the assessment practices (7 items), h) the amount of external governance (7 items), and i) conflict orientation, meaning the situations in which there are local policies related to assessment but the respondent reports that they do not follow them (5 items). For the main analyses, we computed a factor score variable for each of the nine factors of teachers' assessment practices. Their descriptive statistics and correlations are presented in the supplementary material (Supplementary Table 3).

## Analysis

To identify distinct micro-regimes of assessment among teachers based on combinations of the teachers' values in the nine factor score variables of the assessment practices (RQ1), we conducted latent profile analysis (LPA) (for a review, see Spurk et al., 2020; Wang & Hanges, 2011). As a model-based statistical technique, LPA aims to identify groups of teachers that have different configural profiles of the nine assessment practice factors. Here, these groups are called 'micro-regimes'. LPA treats micro-regime membership as an unobserved categorical variable, where its value indicates which micro-regime a teacher belongs to with a certain degree of probability. The LPAs were conducted with the Mplus 8.7 software using the robust maximum likelihood estimation (Muthén & Muthén, 1998–2017).

We estimated various LPA solutions (i.e., number of micro-regimes) for up to six micro-regimes. The appropriate number of micro-regimes was identified and compared with other micro-regime solutions based on the goodness-of-fit of the estimated LPA models, the classification quality of the solution based on entropy (Celeux & Soromenho, 1996), and the interpretability of the solution. We used the Bayesian Information Criterion (BIC), the sample size adjusted Bayesian Information Criterion (aBIC), entropy, the Lo-Mendell Rubin test of the likelihood ratio (LMR) and the Vuong-Lo-Mendell-Rubin test of the likelihood ratio (VLMR) for the statistical evaluation of the best solution (Nylund et al., 2007; Spurk et al., 2020). Moreover, as our sample size is large ( $N = 1,194$ ), very small data-specific micro-regimes without practical significance that were unlikely to be replicated in future studies could have emerged. Therefore, the micro-regime solutions that resulted in the extraction of any micro-regime that included < 5% percent of all teachers were not considered (Marsh et al., 2009). In addition, we qualitatively assessed that the micro-regimes identified are meaningful, interpretable, and theoretically sound.

The relationship of teachers' background characteristics with the teachers' membership in micro-regimes of assessment was investigated by using multinomial logistic regression analysis with Stata 17 software (RQ2). This method was chosen as our outcome variable, the variable indicating the most likely micro-regime membership for each teacher, is a categorical variable. Teachers' induction phase (coded as 0 = six years or more, 1 = 5 years or less) and level of education (coded as 1 = university (the reference category), 2 = university of applied sciences, 3 = older ECEC teacher qualification, 4 = no qualification) served as our independent variables whereas urbanicity of municipality (1 = semi-urban (the reference category), 2 = urban, 3 = rural) was adjusted to account for differences in the geographical location of the ECEC centres.

We present the results as average marginal effects (*AMEs*). What follows is that we predict each micro-regime of assessment one at a time, with the others serving as the reference micro-regimes, one at a time (e.g., Conflicted versus Technocratic-Enthusiasts, Enabling, and Fragmented). *AMEs* measure the average change in predicted probability of belonging to a micro-regime for a certain change in the independent variable of interest when all other variables in the model are held constant at their respective values (Breen et al., 2018; Mize, 2019). *AMEs* are obtained by calculating a predicted probability for every teacher in the sample, after which these effects are averaged (Mize, 2019). The advantage of displaying *AMEs* is that they offer easily interpretable effect size estimates: multiplying the value of an *AME* by a hundred indicates how many percentage points, on average, the probability of belonging to a specific micro-regime increases or decreases by a certain increase in the independent variable (Breen et al., 2018). For statistical inference, we estimate 95 percent confidence intervals (*CI*) for the *AMEs*. A *CI* not including zero is considered as an indication of the statistical significance of the associations.

Some of the teachers in our sample worked in the same ECEC centres. Therefore, the assessment practices of the teachers working within the same centre are likely to be more similar due to the local governing of these practices. This clustering of the data was considered in the analyses by estimating cluster-robust standard errors.

## Results

### Micro-regimes of Assessment

Micro-regimes of assessment were examined based on the nine teachers' assessment practice factor scores, which were categorised into the themes of the Purposes of the Assessment, the Participants of the Assessment, and the Assessment Policies. The goodness-of-fit indices of the LPA models with up to six micro-regime solutions are shown in Table 1. The BIC and aBIC values guided us to choose either 3-micro-regimes solution or 5-micro-regimes solution, which had lower BIC and aBIC values than alternative solutions. Simultaneously, LMR and VLMR tests advocated the 3-micro-regimes solution, as the *p*-values were under .05 while 2-micro-regimes solution (*p* values > .05) indicated that the addition of one more micro-regime to the current solution improves the model fit. Over .70 entropy, on the other hand, indicated that micro-regimes sufficiently differ from each other in all six micro-regime solutions (Celeux & Soromenho, 1996). Respectively, we evaluated that the solutions of more than four micro-regimes did not add substantial value. The 5-micro-regimes solution only divided one of the four micro-regimes into two rather similar groups, thus only showing differences in their overall mean levels. Additionally, in 5-micro-regimes solution, three of the groups included under 5% of all teachers (see Marsh et al., 2009). The groups in a 3-micro-regimes solution differed only in terms of the level of responses (high, medium, low) but not in the qualitative pattern of responses across the variables. This suggested that the micro-regimes in this solution represented variations in intensity rather than different types of micro-regimes. In addition, one of the micro-regimes included under 5% of all teachers (see Marsh et al., 2009). We chose the 4-micro-regimes solution as the final solution based on the overall qualitative assessment of the content of the suggested regimes. In this solution, the average probabilities of assigning respondents to a profile were relatively high, with a range of .83–.92. Based on the factors that constitute these groups, we named the micro-regimes of assessment as follows: 1 = Technocratic-enthusiast regime, 2 = Fragmented regime, 3 = Enabling regime and 4 = Conflicted regime (Figure 1, Table 2). When naming the regimes, we aimed at

describing the regime the teacher belonged to rather than individual respondents.

**Technocratic-enthusiast regime** ( $n = 769, 64\%$ ): Teachers belonging to this micro-regime exhibited above-average scores on external governance of assessment and systemization of assessment. This regime was thus the most heavily governed. They generally scored close, but slightly above average, in all measures with the exception of a low score on conflict orientation. This we interpreted as meaning a strong level of compliance. They reported using assessment for a wide variety of goals, including for assessing children’s learning and development, which was not as common among the teachers in the other micro-regimes. This micro-regime constituted the majority of our sample. The technocratic-enthusiast regime describes a regime that is focused on technocratic values such as evidence-based decision making, innovation and progress, and a focus on human capital development, but that is governed by creating enthusiasm rather than by coercion.

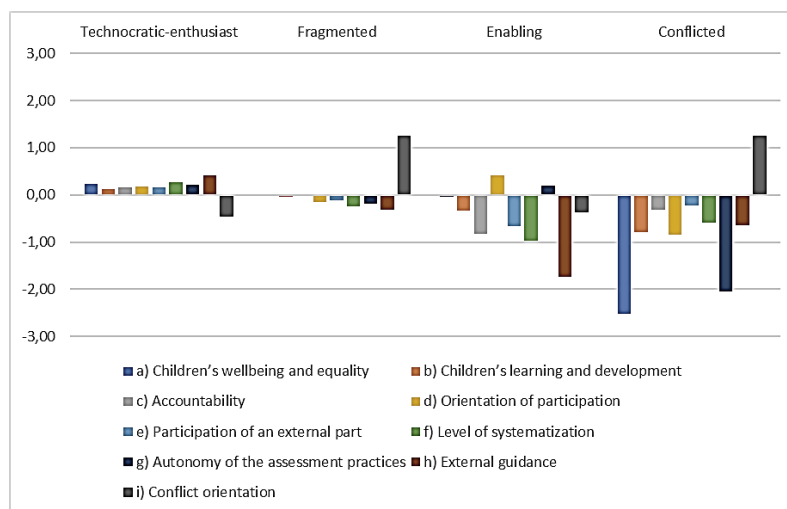
**Fragmented regime** ( $n = 233, 21\%$ ): Teachers in this micro-regime scored around the average on most of the assessment variables, except for a high score on conflict orientation. Moreover, in this micro-regime the assessment teachers scored lower than average on systematization of assessment and external governance. Items related to conflict orientation were related to either uncertainty about the assessment policies or being non-compliant. As the external governance measured low, we interpreted conflict in this micro-regime most likely relating to uncertainty about the policies and the feeling of not being able to comply with even the sparse existing policies rather than resisting the policies. The fragmented regime describes a regime that does not provide systematic support, for example in the form of assessment policies, but rather provides more abstract goals for assessment that teachers are not always sure how to reach.

**Enabling regime** ( $n = 107, 10\%$ ): Teachers belonging to this micro-regime were subjected to less external governance than average. They did not use assessment for accountability purposes, nor did the assessment in this micro-regime focus on children’s individual learning and development but rather on wellbeing and equity. Participation orientation (children and parents) was higher than average while participation of external partners was lower. Conflict orientation scored low. The enabling regime seems to be the closest to the ‘Nordic’ assessment regime identified by earlier assessment culture studies, that does not focus on assessing children and that is particularly participatory.

**Conflicted regime** ( $n = 65, 5\%$ ): Teachers in this micro-regime held an ambiguous orientation to assessment. They tended to view assessment more negatively and utilized it less frequently. In addition, they scored low on autonomy of assessment and reported least often that the purpose of the assessment was to support children’s equity and wellbeing. Conflicted regime thus describes a regime that seems somewhat coercive in a way that teachers own beliefs and values do not align with municipal-level policies.

**Figure 1**

*Micro-Regimes of Assessment Considering the Purposes, Participants, and Policies of Assessment*



**Table 1**  
Model Fit Indices for the Estimated Micro-Regimes

Number of Micro-Regimes	BIC	aBIC	Entropy	LMR <i>p</i> -value	VLMR <i>p</i> -value
1	23978.23	23806.71	-	-	-
2	23826.82	23623.54	.91	.25	.24
3	23712.37	23477.32	.88	.03	.03
4	23663.61	23396.80	.81	.37	.36
5	23625.18	23326.60	.80	.30	.30
6	23612.94	23282.60	.81	.54	.53

**Individual Level Predictors of the Micro-Regime Membership**

Our second research question focused on investigating teachers’ background characteristics as predictors of the membership in micro-regimes. Results of the multinomial logistic regression analyses are displayed in Table 3. Our results showed that being in the induction phase of one’s career was associated with belonging to the conflicted micro-regime. Teachers having worked five years or less in the field of ECEC were five percent more likely to be members of the conflicted regime compared to teachers having more work experience in the ECEC field. Work experience did not predict the membership in the other three assessment regimes.

The results further revealed that the level of education of the teachers was associated with being in the enabling regime in that teachers having a qualification from a kindergarten teacher college were five percent less likely to belong to the enabling regime compared to teachers having a university-level qualification. The level of education did not differentiate teachers in terms of the other three micro-regimes. Thus, these individual level characteristics seemed to play very little role in how teachers responded.

**Table 2**  
Assessment Practice Factors’ Standardized Conditional Means (*M*) and Standard Errors (*S.E.*) Within Assessment Regimes Based on the Final Estimated Latent Profile Analysis Solution

Factors of assessment practices	Technocratic-enthusiast		Fragmented		Enabling		Conflicted		
	<i>M</i>	<i>S.E.</i>	<i>M</i>	<i>S.E.</i>	<i>M</i>	<i>S.E.</i>	<i>M</i>	<i>S.E.</i>	
<b>Purposes of the Assessment</b>									
a) Children’s wellbeing and equality	0.23***	0.05	-0.02	0.15	-0.04	0.10	-2.52***	0.52	
b) Children’s learning and development	0.13**	0.04	-0.04	0.11	-0.33**	0.13	-0.78***	0.24	
c) Accountability	0.16***	0.04	-0.01	0.08	-0.83***	0.17	-0.31	0.17	
<b>Attendants of the Assessment</b>									
d) Orientation of participation	0.17***	0.05	-0.16	0.09	0.42*	0.17	-0.85**	0.32	
e) Participation of an external part	0.16***	0.05	-0.12	0.08	-0.66***	0.10	-0.23	0.18	
<b>Assessment policies</b>									
f) Level of systematization	0.27***	0.05	-0.24***	0.07	-0.98**	0.31	-0.58*	0.24	
g) Autonomy of the assessment practices	0.21***	0.04	-0.18	0.11	0.19	0.10	-2.05***	0.60	
h) External guidance	0.42***	0.05	-0.31***	0.07	-1.74***	0.14	-0.64*	0.28	
i) Conflict orientation	-0.47***	0.05	1.26***	0.09	-0.37***	0.10	1.26***	0.23	

\*\*\**p* ≤ .001, \*\**p* < .01, \**p* < .05

**Table 3**  
Associations of ECEC Teachers’ Background Characteristics on the Probability of Assessment Regime Membership. Predicted Probabilities, Average Marginal Effects (AME), and their 95% Confidence Intervals (CI) are Displayed

Background characteristics	Technocratic-enthusiast ( <i>n</i> = 769)		Fragmented ( <i>n</i> = 233)		Enabling ( <i>n</i> = 107)		Conflicted ( <i>n</i> = 65)	
	Predicted probability	AME (95% CI)	Predicted probability	AME (95% CI)	Predicted probability	AME (95% CI)	Predicted probability	AME (95% CI)
<b>Urbanicity of municipalities</b>								

Assessment in early childhood education: Micro-regimes...

<b>Semi-urban</b>	62.95	–	18.71	–	10.39	–	7.94	–
<b>Urban</b>	66.81	-3.86 (-11.38; 3.66)	20.55	1.84 (-4.10; 7.78)	7.39	-3.00 (-7.58; 1.57)	5.25	-2.70 (-6.82; 1.43)
<b>Rural</b>	60.42	-6.39 (-14.80; 2.02)	17.61	-1.10 (-8.86; 6.65)	17.03	6.64 (-0.33; 13.62)	4.93	-3.01 (-8.12; 2.10)
<b>Work experience in ECEC</b>								
<b>6 years or more</b>	66.18	–	19.46	–	9.74	–	4.62	–
<b>5 years or less</b>	61.76	-4.43 (-11.22; 2.37)	20.86	1.40 (-4.17; 6.96)	7.88	-1.63 (-5.62; 1.92)	9.50	4.88 (0.63; 9.14)
<b>Educational qualification</b>								
<b>University</b>	65.04	–	18.82	–	11.44	–	4.70	–
<b>University of Applied Sciences</b>	62.13	-2.91 (-9.76; 3.94)	23.18	4.37 (-1.28; 10.01)	9.81	-1.62 (-5.89; 2.64)	4.87	0.17 (-2.74; 3.07)
<b>Older qualification</b>	72.34	7.30 (-0.52; 15.11)	14.51	-4.30 (-10.36; 1.76)	6.52	-4.91 (-9.46; -0.36)	6.62	1.92 (-2.38; 6.22)
<b>No qualification</b>	61.61	-3.43 (-15.03; 8.17)	19.87	1.05 (-8.27; 10.36)	7.14	-4.30 (-10.86; 2.27)	11.38	6.68 (-0.76; 14.11)

Note. – = reference category in the analyses

## Discussion

In this article, we introduced the concept of micro-regimes of assessment. We defined micro-regimes of assessment as a set of rules, practices, or arrangements related to assessment at a localized level. We suggest that by examining these micro-regimes by focusing on both local level assessment policies that vary within a national context and group level practices we can have a more nuanced understanding of assessment in ECEC. This is especially important as we seem to live in an era of assessment where assessment has an intensified role in the everyday lives of people. Earlier studies examining assessment cultures have operationalized the phenomena as a singular variable, leading to normative interpretations of assessment cultures being more or less ‘matured’ (Furubo et al., 2002). While this has been a necessary step in understanding the development of the governing contexts of assessment, conceptualizing assessment as embedded in assessment regimes directs the focus on multidimensional nature of assessment practices that vary locally in terms of purposes, participants, and how they are governed.

In this study, we bridged the discussions related on wider ECEC assessment cultures and teacher assessment profiles with the help of the concept micro-regimes of assessment. This allowed us to identify four micro-regimes of assessment that were: 1) Technocratic-enthusiast, 2) Fragmented, 3) Enabling, and 4) Conflicted. The four distinct micro-regimes had clearly different scores on the nine underlying factors that were related to the purposes of the assessment, the participants of the assessment, and the policies of assessment. The technocratic-enthusiast regime was most heavily and systematically governed still maintaining a sense of teacher autonomy. The other micro-regimes included more sparse external guidance related to assessment. By painting a more nuanced picture of how different assessment cultures manifest in varying ways, micro-regimes approach helped us challenging the narrative of a unanimous ‘Nordic’ assessment regime that does not focus on assessing children or that is particularly participatory. This further justifies the increasing interest in local (yet nationally and internationally embedded) practices (e.g., Siippainen et al., 2023). Based on our findings, not focusing on assessing children and participatory nature of assessment that are characteristics typically connected to the ‘Nordic’ assessment regime, were not shared attributes of actual assessment practices. This raises questions about whose voices are included in assessment processes, and how well these well-intended principles become materialised in actual practices.

Even though we did not find particularly strong elements of performative assessment regimes such as research has identified in the U.S. (Bassok et al., 2016); and England (Roberts-Holmes & Bradbury, 2016) different forms of assessment for monitoring young children’s development and learning were used. Some forms of accountability practices were identified in technocratic-enthusiastic regimes. Instead of juxtaposing performative, liberal assessment regimes with social democratic assessment regimes, it might be more fruitful to focus on manifestations of hybrid forms of local assessment regimes. The concept of

micro-regimes of assessment challenges the assumption of homogeneity by showing how hybrid and context-sensitive arrangements emerge at the local level. We assume that similar types of regimes found in Finland could be identified in other decentralized European contexts, such as Denmark or Sweden but perhaps also in more fragmented ECEC systems with a low level of central governance. Applying this lens beyond the Nordic context invites comparative research into how micro-level governance and practices shape assessment cultures in both decentralized and centralized systems.

Work experience and education were connected to the likelihood of micro-regime membership – the orientation towards assessment practices. When having less work experience, the low level of external governance might produce ambivalence and inability to set up functioning group-level practices. By contrast, when having more experience, the low level of external governance might enable setting up democratic and situationally emerging assessment practices as the enabling micro-regime shows. In addition, in our study, contrary to earlier examinations in comprehensive education (Bonner, 2016; Brown, 2006), the age of the children with whom the educators worked, was not connected to micro-regimes. Considering the results of earlier studies, the role of work experience and education in assessment practices is not surprising. Yet, as our results show, they explain rather small amount of the variation between the assessment regimes. This indicates that contextual aspects might influence the orientation more than individual characteristics of educators. Local identification of micro-regimes would provide insights for policymakers in designing professional development programs that align with local assessment needs. By identifying local micro-regimes of assessment, local actors might be able to take more conscious stance in relation to assessment policies and practices.

There are limitations in our study. First, it should be noted that the study is based on a local sample: all the teachers worked in Finland. It would be interesting to explore whether the same measurement instrument works in other contexts and to what extent the number and the characteristics of micro-regimes vary depending on the country context. Second, although the teachers in our sample were quite representative of the population of ECEC teachers in Finland, it is possible that participating teachers could have had stronger views, either positive or negative, on assessment. Third, the study was retrospective and based on self-reported practices. Individuals may struggle to accurately remember their assessment practices. Given that this study introduced the concept of micro-regimes of assessment and employed Latent Profile Analysis (LPA) to empirically identify distinct assessment patterns, future research could build on this conceptual and methodological groundwork more explicitly. For example, the conceptualisation of micro-regimes can inform mixed-method designs that combine quantitative approaches (such as LPA) with ethnographic or interview-based inquiry. This would enable researchers to link statistically derived profiles with the lived practices, institutional conditions and constitutive effects of micro-regimes. Similarly, longitudinal designs could trace how micro-regimes evolve over time, and how policy developments or organisational changes shape these trajectories. In addition to that, in future studies it will be important to extend this study to other countries as they might lead to getting a more robust view of micro-regimes of assessment. Understanding the constitutive effects of micro-regimes on educators work and experiences of children would require further analysis.

In sum, our study provides a new way to examine the variation in assessment practices at a local level within ECEC. This framework allows moving beyond national or cultural assessment regimes, emphasizing the unique and context-sensitive dynamics of assessment practices. The variation in assessment regimes relates to the aims of assessment, institutional arrangements in the governing, and what kind of epistemic community is involved in evaluation processes. The variation happens, in addition to the national level, at the local level as well as Urban and colleagues (2023) have tentatively suggested, and Siippainen and colleagues (2023) have shown in a qualitative case study. On one hand, the differences between the micro-regimes affect educators' ability to enact democratic and participatory practices, which are central to social justice in ECEC. On the other hand, local variation can allow assessment approaches to be adapted to local needs. Maintaining diversity and pluralism are essential for fairness and inclusion. Grasping these aspects of evaluation regimes requires new instruments, and perhaps a paradigm, for researching the phenomena.

## Declarations

### *Authors' Declarations*

**Acknowledgements:** We'd like to thank the members of Assessment and Evaluation in the Era of Datafication research project, Anna Siippainen, Antti Paakkari and Hanna Toivonen in their contribution in the data collection and interpretation of the results.

**Authors' contributions:** M.P. was responsible for designing the study, leading the conceptual development, and defining the contribution. E.L. contributed to designing the instrument, carried out the data collection, and conducted the analysis. E.R. participated in planning the study design and supported the analysis. All authors contributed to interpreting the results and to writing and editing the manuscript.

**Competing interests:** The authors declare that they have no competing interests.

**Funding:** The project was funded by Emil Aaltonen foundation (Grant number 200257P). The funding body did not contribute to the design, execution, or reporting of the study.

**Ethics approval and consent to participate:** According to ethical guidelines provided by Finnish National Board on Research Integrity, no formal ethical approval was required for this study as it was based on voluntary participation, and posed no harm to participants. Participants were informed about the purpose of the study, their right to withdraw at any time, and the principles governing the storage and use of personal data, and they provided their consent for the use of their data.

### *Publisher's Declarations*

**Editorial Acknowledgement:** The editorial process of this article was completed under the editorship of Dr. Mesut Saçkes through a double-blind peer review with external reviewers.

**Publisher's Note:** Journal of Childhood, Education & Society remains neutral with regard to jurisdictional claims in published maps and institutional affiliation.

## References

- Asparouhov, T. & Muthén, B.O. (2009). Exploratory structural equation modeling. *Structural Equation Modeling: A Multidisciplinary Journal*, 16(3), 397–438. <https://doi.org/10.1080/10705510903008204>
- Bassok, D., Latham, S., & Rorem, A. (2016). Is kindergarten the new first grade? *AERA Open*, 2(1), 1–31. <https://doi.org/10.1177/2332858415616358>
- Biesta, G. (2009). Good education in an age of measurement: On the need to reconnect with the question of purpose in education. *Educational Assessment, Evaluation and Accountability (formerly: Journal of Personnel Evaluation in Education)*, 21(1), 33–46.
- Biesta, G. (2015). What is education for? On good education, teacher judgement, and educational professionalism. *European Journal of Education*, 50(1), 75–87. <https://doi.org/10.1111/ejed.12109>
- Bonner, S. M. (2016). Teachers' perceptions about assessment: Competing narratives. In S. M. Bonner (Ed.), *Handbook of human and social conditions in assessment*. (pp. 21–39). Routledge.
- Breen, R., Karlson, K. B., & Holm, A. (2018). Interpreting and understanding logits, probits, and other nonlinear probability models. *Annual Review of Sociology*, 44(1), 39–54. <https://doi.org/10.1146/annurev-soc-073117-041429>
- Brown, G. T. L. (2004). Teachers' conceptions of assessment: Implications for policy and professional development. *Assessment in Education: Principles, Policy & Practice*, 11(3), 301–318. <https://doi.org/10.1080/0969594042000304609>
- Brown, G. T. L. (2006). Teachers' conceptions of assessment: Validation of an abridged version. *Psychological Reports*, 99(1), 166–170. <https://doi.org/10.2466/pr0.99.1.166-170>
- Celeux, G., & Soromenho, G. (1996). An entropy criterion for assessing the number of clusters in a mixture model. *Journal of Classification*, 13, 195–212. <https://doi.org/10.1007/BF01246098>
- Coombs, A., DeLuca, C., & MacGregor, S. (2020). A person-centered analysis of teacher candidates' approaches to assessment. *Teaching and Teacher Education*, 87, 102952. <https://doi.org/10.1016/j.tate.2019.102952>
- Dahler-Larsen, P. (2012). *The evaluation society*. Stanford University Press.
- Dahler-Larsen, P. (Ed.). (2021). *A research agenda for evaluation*. Edward Elgar Publishing.
- Dahler-Larsen, P., & Boodhoo, A. (2019). Evaluation culture and good governance: Is there a link? *Evaluation*, 25(3), 277–293. <https://doi.org/10.1177/1356389018819110>
- Finnish National Agency for Education (2022). *National core curriculum of early childhood education* (Regulation OPH-700-2022). Finnish National Agency for Education.
- Finnish National Board on Research Integrity (2019). *The ethical principles of research with human participants and ethical review in the human sciences in Finland* (TENK Publications 2019:3). Finnish National Board on Research Integrity.

- Furubo, J.-E., Rist, R. C., & Sandahl, R. (2002). *International atlas of evaluation*. Transaction Publishers.
- Horn, J. (1965). A rationale and test for the number of factors in factor analysis. *Psychometrika*, (30), 179–185. <https://doi.org/10.1007/BF02289447>
- Jacob, S., Speer, S., & Furubo, J.-E. (2015). The institutionalization of evaluation matters: Updating the International Atlas of Evaluation 10 years later. *Evaluation*, 21(1), 6–31. <https://doi.org/10.1177/1356389014564248>
- Lindh, C., & Mansikka, J.-E. (2023). Adoption of pedagogical documentation in Finnish ECEC settings. *Early Childhood Education Journal*, 51(2), 393–405. <https://doi.org/10.1007/s10643-022-01321-6>
- Lui, A. M., & Bonner, S. M. (2016). Preservice and inservice teachers' knowledge, beliefs, and instructional planning in primary school mathematics. *Teaching and Teacher Education*, 56, 1–13. <https://doi.org/10.1016/j.tate.2016.01.015>
- Marsh, H., Lüdtke, O., Trautwein, U., & Morin, A. J. S. (2009). Classical latent profile analysis of academic self-concept dimensions: Synergy of person- and variable-centered approaches to theoretical models of self-concept. *Structural Equation Modeling*, 16, 191–225. <https://doi.org/10.1080/10705510902751010>
- Mize, T. D. (2019). Best practices for estimating, interpreting, and presenting nonlinear interaction effects. *Sociological Science*, 6, 81–117. <https://doi.org/10.15195/v6.a4>
- Marsh, H. W., Morin, A. J. S., Parker, P. D., & Kaur, G. (2014). Exploratory structural equation modeling: An integration of the best features of exploratory and confirmatory factor analysis. *Annual Review of Clinical Psychology*, 10(1), 85–110. <https://doi.org/10.1146/annurev-clinpsy-032813-153700>
- Muthén, L. K., & Muthén, B. O. (1998–2017). *Mplus user's guide* (8<sup>th</sup> ed.). Muthén & Muthén.
- Nylund, K. L., Asparouhov, T., & Muthén, B. O. (2007). Deciding on the number of classes in latent class analysis and growth mixture modeling: A Monte Carlo simulation study. *Structural Equation Modeling: A Multidisciplinary Journal*, 14(4), 535–569. <https://doi.org/10.1080/10705510701575396>
- Roberts-Holmes, G., & Bradbury, A. (2016). Governance, accountability, and the datafication of early years education in England. *British Educational Research Journal*, 42(4), 600–613. <https://doi.org/10.1002/berj.3221>
- Roberts-Holmes, G., & Moss, P. (2021). *Neoliberalism and early childhood education: Markets, imaginaries and governance*. Routledge.
- Siippainen, A., & Paananen, M. (Eds.) (2025). *Mitattu lapsuus. Varhaiskasvatuksen arviointi Suomessa* [Measured childhood: Assessment and evaluation in early childhood education in Finland]. Gaudeamus.
- Siippainen, A., Toivonen, H., & Paakkari, A. (2023). Toward a democracy of translations? Local evaluation actor networks in Finnish early childhood education. *Global Studies of Childhood*, 13(3), 217–231. <https://doi.org/10.1177/20436106231175026>
- Statistics Finland (2025). Early childhood education and care. Reference period: 2024. Helsinki: Statistics Finland. <https://stat.fi/en/publication/cm0ox84x06hki06um86ddd600>
- Spurk, D., Hirschi, A., Wang, M., Valero, D., & Kauffeld, S. (2020). Latent profile analysis: A review and “how to” guide of its application within vocational behavior research. *Journal of Vocational Behavior*, 120, Article 103445. <https://doi.org/10.1016/j.jvb.2020.103445>
- Urban, M., Reikerås, E., Eidsvåg, G. M., Guevara, J., Saebø, J., & Semmoloni, C. (2023). Nordic approaches to evaluation and assessment in early childhood education and care. *Global Studies of Childhood*, 13(3), 200–216. <https://doi.org/10.1177/20436106231179617>
- Veldhuis, M., & van den Heuvel-Panhuizen, M. (2014). Primary school teachers' assessment profiles in mathematics education. *PLOS ONE*, 9(1), 1–11. <https://doi.org/10.1371/journal.pone.0086817>
- Wang, M., & Hanges, P. J. (2011). Latent class procedures: Applications to organizational research. *Organizational Research Methods*, 14(1), 24–31. <https://doi.org/10.1177/1094428110383988>

## **Appendix 1:** Supplementary Material for Assessment in Early Childhood Education: Micro-regimes Perspective

### **Factorial Validity of 'Assessment in Early Childhood Education and Care Questionnaire' [AECEQ]**

#### *Factors of Teachers' Assessment Practices*

In what follows, we will introduce the exploratory factor analysis carried out for our data collected as part of the project [anonymized] that aimed to examine Micro-regimes of assessment in early childhood education.

At the time of data collection, there were no ready-made measures available to study assessment in institutional early childhood education and care (ECEC). Our intention was to develop a set of instruments to study variation in assessment practices in the everyday life of ECEC. Developed statements considered five different categories of assessment: assessment of the preschool environment, assessment of the pedagogical practices, assessment of the child's skills, assessment of the parents' satisfaction and assessment of the economy. The statements of the first three categories are analysed in this article and represented in the supplement table 1. The statements T1e–T8e and P1e–P12e consider the teachers' conceptions about the assessment of the preschool environment. The statements T9p–T16p and P13p–P24p reflect on the assessment of the pedagogical practices. Finally, the statements T17c–T25c, A8c–A14c and P25c–P39c take into account the assessment of the child's skills. In addition to those statements A1c–A7c consider attendants to both assessment of the preschool environment and assessment of the pedagogical practices.

For each statement, the teacher was asked to evaluate how well the statement describes assessment in his or her workplace. Response scale ranged from 1 = strongly disagree to 5 = strongly agree. The questionnaire was piloted with 27 ECEC teacher before the actual data collection. Based on the piloting the statements were modified for the actual data collection.

Exploratory factor analysis (EFA) and exploratory structural equation modelling (ESEM) (Asparouhov & Muthén, 2009; for a review, see Marsh et al., 2014) were utilized to identify latent structure of the teachers' conceptions of assessment practices and to form the factor score variables for further analysis. We complemented our EFAs by using ESEM instead of traditional structural equation modelling as ESEM allows to explore various EFA-based factor solutions in more detail by utilizing goodness-of-fit indices and including correlated residual variances. Both tools have previously been possible only within traditional structural equation modelling framework that can include only latent variables based on confirmatory factor analysis (CFA).

The EFA and ESEM were conducted with Mplus 8.7 software using the robust maximum likelihood estimation and GEOMIN-rotation (Muthén & Muthén, 1998-2017). The robust maximum likelihood estimation was applied because of the nonnormality of the data (Asparouhov & Muthén, 2009). GEOMIN as an oblique rotation was chosen as it allows the factors to correlate with one another and thereby accounts for the interlinkages between the with the assessment practice factors. As our data was hierarchical (teachers, preschools, municipalities), we used the COMPLEX option in all analyses, using the preschools as the cluster. In this survey, 1–8 teachers participated from individual preschool. Slightly less than half of the teachers ( $n = 568$ , 47.6%) worked in preschool with more than one participant.

The EFA analysis of teachers' assessment practice factors was carried out separately for tasks of the assessment T1e–T25c, attendants of the assessment A1pe–A14c and policies of assessment P1e–P39c (Supplement Table 1). We used multiple criteria to identify the final factor solution: solution should be 1) substantively meaningful and 2) sufficient regarding the parallel analysis (Horn, 1965) and statistical fit indices (see later). Additionally, 3) every statement should have stronger than .32 factor loading at least in one of the teachers' assessment practice factors. If any of the statements did not achieve a factor loading above this threshold for any of the factors, the analysis was repeated without that statement. Abovementioned exclusions were made only one item at the time. Conversely, if the statement cross-

loaded and received a factor loading over .32 on two or more factors, the statement was only included in the analysis if the cross-loading was substantially justified.

The  $X^2$ -test, the comparative fit index (CFI), the Tucker-Lewis index (TLI), the root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR) to examine the fit of the statistical models to the data. None of the factor solutions fully met the model fit thresholds of non-significant  $p$  value for the  $X^2$ -test ( $p \geq .05$ ),  $CFI \geq .90$ ,  $TLI \geq .90$ ,  $RMSEA < .08$  and  $SRMR < .10$ . ESEM analyses were used to refine the factor solutions by utilising the information provided by the modification indices (MI) on the unexplained covariation between the residuals of the statements (later the residual correlations). Large residual correlations between statements were released for factor solution estimation if they were substantively justified and improved sufficiently the fit of the model.

In the first set of EFA analyses, which focused on the purposes of assessment, from the 25 items emerged three factors: a) children's wellbeing and equality (13 items), b) children's learning and development (6 items), and c) accountability being an important aim of the assessment they had used in their child group (8 items). Supplement table 2 shows that two items (T24p, T25c) were included in the solution even though they cross-loaded both the children's wellbeing and equality factor and the children's learning and development factor. The items were conceptually relevant to both factors. In addition, based on MI, a residual correlation between items, T8e and T16p were excluded for the final factor solution, because it was assessed that the wording of those items influenced the results unintended way. Unlike the other items, T8e and T16p concerned adults' wellbeing but shared the term '*toiminta*' or '*toimintaympäristö*' with other items. After these modifications, the model fit indices for the final three factors' solution of teachers' conceptions of assessment purposes were  $X^2/df = 7.74$ ,  $p < .001$ ,  $RMSEA = .08$ ,  $CFI = .80$ ,  $TLI = .73$ ,  $SRMR = .05$ .

Second set of EFA analyses considered attendants of the assessment. Five items were excluded from the analysis one-by-one in the following order: A8c, A9c, A14c, A13c and A1pe. Most of the items were excluded because those items did not load any of the factors with at least a factor loading of .32. Item A9c was excluded because of the high factor loading. Item A9c exhibited exceptionally high loading of 1.33 on what was initially identified as the third factor. This loading is substantially higher compared to the loadings of other items on the same factor, which were all below 0.15. The disproportionate loading of item A9c effectively caused it to dominate the third factor, overshadowing the contributions of other items. As a result, the factor primarily reflected the variance of Item A9c rather than a coherent underlying construct represented by multiple items. Thus, it suggests that the third factor did not represent a meaningful dimension of the attendants of assessment. Finally, from nine items considering attendants of the assessment we identified two factors, which described to the extent d) parents and children were involved based on different forms of assessments (6 items) and e) external partners were involved (3 items). Model fit indices were as follows:  $X^2/df = 11.84$ ,  $p < .001$ ,  $RMSEA = .11$ ,  $CFI = .92$ ,  $TLI = .84$ ,  $SRMR = .04$ .

At the beginning of third set of EFA analyses, 39 items regarding policies of the assessment, were examined. Of these items, 15 were excluded from the analysis one-by-one in the following order: P39c, P24p, P32c, P34c, P35c, P37c, P25c, P26c, P21p, P12e, P19p, P20p, P33c, P10e and P22p because those (except item P10) did not load to any of the factors. Item P10 was excluded because of the cross-loading to first (.45) and second (.45) factors. The cross-loading was not conceptually justifiable. The remaining 24 items formed four factors, which related to the f) level of systematization in assessment practices (7 items), meaning how frequent and planned assessment practices were (7 items), g) autonomy of the assessment practices (7 items), h) the amount of external governance (7 items), and i) conflict orientation, meaning the situations in which there are local policies related to assessment but the respondent reports that they do not follow them (5 items). In the final factor solution two items (P16p, P17p) cross-loaded and were included both into the level of systemization factor and the external guidance factor (Supplement Table 2) as they were conceptually meaningful for both factors. In addition, a residual correlation between similarly designed items P15p and P28c were released, leading to the following model fit indices:  $X^2/df = 5.77$ ,  $p < .001$ ,  $RMSEA = .06$ ,  $CFI = .84$ ,  $TLI = .76$ ,  $SRMR = .04$ . Eventually, the nine factors representing assessment practices in

ECEC were computed as factor score variables and used as the indicator variables of the latent profile analysis in the article. Their descriptive statistics and correlations are presented in Supplement Table 3.

**Supplement Table 1**

*Assessment Practices Items Concerning Preschool Environment, Pedagogical Practices and Children's Skills*

<b>Purposes of the Assessment</b>	
T1e	demonstrate to the manager, administration, or parents that our environment is of high quality
T2e	have influence within the organization (i.e., the municipality/private ECEC center)
T3e	ensure meeting the objectives defined somewhere else than in the National Core Curriculum for ECEC
T4e	ensure that the environment cater children's individual needs
T5e	ensure that the environment responds to the interests of children
T6e	ensure that the environment promotes equity between children
T7e	ensure that the environment supports children's health, wellbeing, and safety
T8e	ensure that the environment supports educators' health, wellbeing, and safety
T9p	demonstrate to the manager, administration, or parents that our pedagogical practices are of high quality
T10p	have influence within the organization (municipality/private ECEC centre)
T11p	ensure meeting the objectives defined somewhere else than in the National Core Curriculum of ECEC
T12p	ensure that the assessment of pedagogical practices cater children's individual needs
T13p	ensure that the assessment of pedagogical practices responds to the interests of children
T14p	ensure that the pedagogical practices promote equity between children
T15p	ensure that the pedagogical practices support children's health, wellbeing, and safety
T16p	ensure that the pedagogical practices support educators' health, wellbeing, and safety
T17c	demonstrate to the manager, administration, or parents that our pedagogical practices are of high quality
T18c	have influence within the organization (i.e., the municipal/private ECEC centre)
T19c	demonstrate or recognize individual child's needs of support
T20c	ensure that children's learning and development meet the objectives defined elsewhere (e.g. by child welfare clinic)
T21c	ensure that children's learning and development meet the objectives defined by municipality/ECEC centre
T22c	ensure that children's learning and development meet the objectives defined by educators of the group
T23c	ensure that individual children's learning and development meet the objectives set together with parents
T24c	ensure equity between children
T25c	ensure the realization of children's health, wellbeing, and security
<b>Attendants of the Assessment</b>	
A1pe	...parents participate in producing the information for assessment
A2pe	...parents participate in interpreting the information for assessment
A3pe	...children participate in producing the information for assessment
A4pe	...children participate in interpreting the information for assessment
A5pe	...leader of the ECEC centre participates to the assessment
A6pe	...the assessment information of the pedagogical practices produced by our group, is used by external parties
A7pe	...the assessment information of the environment produced by our group, is used by external part of the group
A8c	We assess children only as part of making the child's individual ECEC plan
A9c	...parents participate in producing the information for assessment
A10c	...parents participate in interpreting the information for assessment
A11c	...children participate in producing the information about themselves
A12c	...children participate in interpreting the information about themselves
A13c	...leader of the ECEC centre participates in the assessment
A14c	...other party participates regularly to the assessment of children
<b>Policies of the Assessment</b>	
P1e	Assessment of the physical environment is regular part of the everyday life of our group
P2e	In our group, we independently decide on the assessment practices
P3e	I do not know where the decisions related to assessing the environment have been made
P4e	The assessment practices related to assessing the environment has been decided jointly in the ECEC centre
P5e	The assessment practices related to assessing the environment has been decided by the administration
P6e	Our organization has policies for the assessment of the environment, but they are not enacted.
P7e	Our group has an annual plan for the assessment of the environment
P8e	In our group, we do short-term planning for the assessment of the environment
P9e	Mainly, we evaluate the environment in informal discussions between educators
P10e	I'm satisfied with the practices related to assessment of the environment in our group
P11e	Develop the environment among our own group

P12e	Develop the environment based on external views
P13p	Assessment of pedagogy is a regular part of the everyday life of our group
P14p	In our group, we independently decide on the practices related to the assessment of pedagogy
P15p	I do not know where the decisions related to assessing the pedagogy have been made
P16p	The assessment practices related to assessing pedagogy has been decided jointly in the ECEC centre
P17p	The assessment practices related to assessing the environment has been decided by the administration
P18p	Our organization has policies for the assessment of pedagogy, but we do not follow them.
P19p	Our group has an annual plan for the assessment of pedagogy
P20p	In our group, we do short-term planning for the assessment of pedagogy
P21p	Mainly, we assess pedagogy in informal discussions between educators
P22p	I'm satisfied with the assessment practices related to pedagogy in our group
P23p	Develop the pedagogical practices among our own group
P24p	Develop the pedagogical practices based on external views
P25c	In our group, we avoid assessing children's skills
P26c	Assessing children's skills is a regular part of the everyday life of our group
P27c	In our group, we independently decide on the child assessment practices
P28c	I do not know where the decisions on child assessment practices used in our group have been made
P29c	The assessment practices related to child assessment have been decided jointly in the ECEC centre
P30c	The assessment practices related to assessing the environment has been decided by the administration
P31c	Our organization has policies for child assessment, but we do not follow them.
P32c	Our group has an annual plan for child assessment
P33c	In our group, we do short-term planning related to child assessment
P34c	We assess children only part of making child's individual ECEC plan
P35c	Mainly, we assess children in informal discussions between educators
P36c	In our group, we use assessment methods developed elsewhere (e.g. standardized tests) for assessing children's skills
P37c	I'm satisfied with the assessment practices related to child assessment in our group
P38c	Develop the pedagogical practices among our own group
P39c	Develop the pedagogical practices based on external views

e = statement consider assessment information of the preschool environment, p = statement consider assessment information of the pedagogical practices, c = statement consider assessment information of the children and pe = statement consider assessment information of both the pedagogical practices and the preschool environment

**Supplement Table 2**

*Factors Of Assessment Practices*

Purposes of the Assessment		Factor 1	Factor 2	Factor 3
<b>Factor 1: Children's wellbeing and equality (a)</b>				
T5e	ensure that the environment responds to the interests of children	<b>0.72</b>	0.02	-0.09
T14p	ensure that the pedagogical practices promote equity between children	<b>0.72</b>	0.05	0.14
T7e	ensure that the environment supports children's health, wellbeing, and safety	<b>0.70</b>	-0.01	-0.09
T15p	ensure that the pedagogical practices support children's health, wellbeing, and safety	<b>0.70</b>	0.00	0.10
T6e	ensure that the environment promotes equity between children	<b>0.69</b>	0.13	-0.01
T13p	ensure that the assessment of pedagogical practices responds to the interests of children	<b>0.67</b>	0.01	0.05
T12p	ensure that the assessment of pedagogical practices cater children's individual needs	<b>0.55</b>	-0.05	0.09
T24c	ensure equity between children	<b>0.51</b>	0.00	0.39
T25c	ensure the realization of children's health, wellbeing, and security	<b>0.51</b>	-0.02	0.34
T4e	ensure that the environment cater children's individual needs	<b>0.50</b>	-0.06	-0.07
T8e	ensure that the environment supports educators' health, wellbeing, and safety	<b>0.50</b>	0.23	-0.04
T16p	ensure that the pedagogical practices support educators' health, wellbeing, and safety	<b>0.44</b>	0.28	0.07
T19c	demonstrate or recognize individual child's needs of support	<b>0.38</b>	-0.14	0.31
<b>Factor 2: Children's learning and development (b)</b>				
T22c	ensure that children's learning and development meet the objectives defined by educators of the group	0.01	0.14	<b>0.71</b>
T21c	ensure that children's learning and development meet the objectives defined by municipality/ECEC centre	0.00	0.21	<b>0.68</b>
T23c	ensure that individual children's learning and development meet the objectives set together with parents	0.27	0.00	<b>0.60</b>
T20c	ensure that children's learning and development meet the objectives defined elsewhere (e.g. by child welfare clinic)	0.01	0.26	<b>0.53</b>
T24c	ensure equity between children	0.51	0.00	<b>0.39</b>
T25c	ensure the realization of children's health, wellbeing, and security	0.51	-0.02	<b>0.34</b>
<b>Factor 3: Accountability (c)</b>				

## Assessment in early childhood education: Micro-regimes...

T10p	have influence within the organization (i.e., the municipality/private ECEC center)	0.09	<b>0.72</b>	-0.01	
T17c	demonstrate to the manager, administration, or parents that our pedagogical practices are of high quality	-0.03	<b>0.68</b>	0.21	
T9p	demonstrate to the manager, administration, or parents that our pedagogical practices are of high quality	0.08	<b>0.67</b>	0.04	
T18c	have influence within the organization (i.e., the municipality/private ECEC center)	-0.02	<b>0.66</b>	0.15	
T2e	have influence within the organization (i.e., the municipality/private ECEC center)	0.05	<b>0.65</b>	-0.05	
T1e	demonstrate to the manager, administration, or parents that our environment is of high quality	0.17	<b>0.60</b>	-0.04	
T3e	ensure meeting the objectives defined somewhere else than in the National Core Curriculum for ECEC	0.13	<b>0.36</b>	0.03	
T11p	ensure meeting the objectives defined somewhere else than in the National Core Curriculum for ECEC	0.16	<b>0.33</b>	0.06	
<b>Attendants of the Assessment</b>		<b>Factor 1</b>	<b>Factor 2</b>		
<b>Factor 1: Orientation to participation (d)</b>					
A12c	...children participate in interpreting the information about themselves	<b>0.84</b>	0.00		
A11c	...children participate in producing the information about themselves	<b>0.73</b>	-0.02		
A4pe	...children participate in interpreting the information for assessment	<b>0.69</b>	0.05		
A3pe	...children participate in producing the information for assessment	<b>0.60</b>	0.03		
A10c	...parents participate in interpreting the information for assessment	<b>0.50</b>	-0.02		
A2pe	...parents participate in interpreting the information for assessment	<b>0.37</b>	0.26		
<b>Factor 2: Participation of an external partners (e)</b>					
A7pe	...the assessment information of the environment produced by our group, is used by external part of the group	-0.02	<b>0.95</b>		
A6pe	...the assessment information of the pedagogical practices produced by our group, is used by external parties	0.02	<b>0.87</b>		
A5pe	...leader of the ECEC centre participates to the assessment	0.18	<b>0.33</b>		
<b>Policies of the Assessment</b>		<b>Factor 1</b>	<b>Factor 2</b>	<b>Factor 3</b>	<b>Factor 4</b>
<b>Factor 1: Level of systematization (f)</b>					
P6e	Our organization has policies for the assessment of the environment, but they are not enacted	<b>0.80</b>	-0.04	-0.06	0.16
P5e	The assessment practices related to assessing the environment has been decided by the administration	<b>0.69</b>	-0.04	0.10	0.16
P7e	Our group has an annual plan for the assessment of the environment	<b>0.62</b>	-0.12	0.01	0.01
P8e	In our group, we do short-term planning for the assessment of the environment	<b>0.50</b>	0.18	-0.01	0.00
P16p	The assessment practices related to assessing pedagogy has been decided jointly in the ECEC centre	<b>0.43</b>	0.04	0.33	-0.08
P3e	I do not know where the decisions related to assessing the environment have been made	<b>-0.37</b>	-0.19	0.03	0.26
P17p	The assessment practices related to assessing the environment has been decided by the administration	<b>0.36</b>	0.04	0.50	0.05
<b>Factor 2: Autonomy of the assessment practices (g)</b>					
P11e	Develop the environment among our own group	0.07	<b>0.57</b>	0.01	0.00
P1e	Assessment of the physical environment is regular part of the everyday life of our group	0.25	<b>0.53</b>	-0.04	0.01
P2e	In our group, we independently decide on the assessment practices	-0.10	<b>0.52</b>	-0.12	0.05
P23p	Develop the pedagogical practices among our own group	-0.01	<b>0.49</b>	0.06	-0.21
P38c	Develop the pedagogical practices among our own group	-0.06	<b>0.40</b>	0.14	-0.17
P13p	Assessment of pedagogy is a regular part of the everyday life of our group	0.07	<b>0.39</b>	0.06	-0.25
P9e	Mainly, we evaluate the environment in informal discussions between educators	-0.15	<b>0.37</b>	0.02	0.02
<b>Factor 3: External guidance (h)</b>					
P30c	The assessment practices related to assessing the environment has been decided by the administration	-0.01	-0.03	<b>0.73</b>	0.01
P17p	The assessment practices related to assessing the environment has been decided by the administration	0.36	0.04	<b>0.50</b>	0.05
P27c	In our group, we independently decide on the child assessment practices	0.07	0.23	<b>-0.44</b>	0.01
P29c	The assessment practices related to child assessment have been decided jointly in the ECEC centre	0.24	-0.01	<b>0.38</b>	-0.15
P14p	In our group, we independently decide on the practices related to the assessment of pedagogy	-0.05	0.30	<b>-0.37</b>	-0.04
P36c	In our group, we use assessment methods developed elsewhere (e.g. standardized tests) for assessing children's skills	-0.09	0.03	<b>0.36</b>	-0.05
P16p	The assessment practices related to assessing pedagogy has been decided jointly in the ECEC centre	0.43	0.04	<b>0.33</b>	-0.08
<b>Factor 4: Conflict orientation (i)</b>					
P31c	Our organization has policies for child assessment, but we do not follow them	0.05	0.07	0.00	<b>0.78</b>
P18p	Our organization has policies for the assessment of pedagogy, but we do not follow them	-0.01	0.05	0.05	<b>0.73</b>
P6e	Our organization has policies for the assessment of the environment, but they are not enacted	0.02	-0.05	0.04	<b>0.53</b>
P28c	I do not know where the decisions on child assessment practices used in our group have been made	-0.15	-0.09	-0.20	<b>0.43</b>

P15p	I do not know where the decisions related to assessing the pedagogy have been made	-0.23	-0.16	-0.12	<b>0.36</b>
------	--	-------	-------	-------	-------------

e = statement consider assessment information of the preschool environment, p = statement consider assessment information of the pedagogical practices, c = statement consider assessment information of the children and pe = statement consider assessment information of both the pedagogical practices and the preschool environment

**Supplement Table 3**

*Descriptives, McDonald's  $\omega$ , and Pearson's Correlation Matrix of the Assessment Practice Variables (min = 1, max = 5)*

<b>Factors of teachers' assessment practices</b>	<i>n</i>	<i>M</i>	<i>SD</i>	$\omega$	a)	b)	c)	d)	e)	f)	g)	h)
<b>Purposes of the Assessment</b>												
a) Children's wellbeing and equality	1190	4.42	0.53	.88								
b) Children's learning and development	846	4.22	0.61	.81	.33***							
c) Accountability	1190	3.15	0.75	.83	.22***	.22***						
<b>Attendants of the Assessment</b>												
d) Orientation to participation	975	3.26	0.79	.81	.31***	.29***	.18***					
e) Participation of an external partners	972	2.90	0.97	.86	.19***	.44***	.12***	.45***				
<b>Policies of the Assessment</b>												
f) Level of systematization	1193	3.33	0.81	.79	.30***	.43***	.17***	.36***	.43***			
g) Autonomy of the assessment practices	1193	4.26	0.52	.71	.50***	.11***	.26***	.23***	.06	.17***		
h) External guidance	1087	3.23	0.69	.69	.27***	.26***	.23***	.29***	.29***	.44***	.18***	
i) Conflict orientation	1192	1.77	0.70	.74	-.42***	-.13***	-.26***	-.29***	-.13***	-.33***	-.48***	-.34***

\*\*\* $p \leq .001$

Descriptive statistics are calculated from the mean sum variables, but the analysis uses factor score variables

# Exploring teachers' perspectives on home visit practices in early childhood special education: A qualitative study from Türkiye

Ahmet İlkan Yetkin<sup>1</sup>, Özlem Yağcıoğlu Has<sup>2</sup>, Furkan Akdağ<sup>3</sup>

**Abstract:** This study explores preschool teachers' perspectives on home visit practices as a means of strengthening school-family collaboration in early childhood education. Home visits are increasingly recognized as an effective tool for building trust, supporting children's social-emotional development, and promoting continuity between home and school environments. Despite their potential benefits, the implementation and perceived impact of home visits vary widely across educational contexts. Using a descriptive qualitative design, this study examined the experiences, perceived benefits, and challenges reported by 10 special education teachers working in public early childhood institutions. Data were collected through semi-structured interviews and field notes. These are analyzed using thematic content analysis. Findings indicated that teachers view home visits as a valuable practice that enhances communication with families, provides insights into children's home lives, and strengthens teacher-parent partnerships. Teachers reported that home visits support children's adaptation, classroom behavior, and academic readiness by fostering a sense of security and familiarity. However, they also identified several challenges, including time constraints, workload, safety concerns, and limited parental participation. Teachers emphasized the need for institutional support, structured guidelines, and professional development to implement home visits more effectively. Overall, the study highlights that while home visits contribute meaningfully to early childhood education, sustainable implementation requires systematic planning, administrative support, and clear standards. These findings may guide policymakers, school administrators, and practitioners in designing more comprehensive and effective home visit programs.

## Article History

Received: 22 November 2025

Accepted: 06 February 2026

## Keywords

Home visits;  
Early childhood special  
education; Early Intervention  
practices; Teachers' view

## Introduction

Early childhood represents a critical developmental stage during which the foundations of lifelong learning, behavior, and adaptive functioning are established. Educational and support services provided during this period promote not only cognitive growth but also holistic development across social, emotional, and physical domains. For children with special needs, early childhood education plays a pivotal role in identifying developmental delays and implementing appropriate interventions, thus forming the cornerstone of early intervention processes (Duffee et al., 2017). Within this context, home visits in early childhood special education have become a widely adopted practice worldwide, aiming to support children's development in their natural environments, strengthen family engagement, and enhance collaboration between teachers and families (Brentani et al., 2021).

Research in the field consistently demonstrates that home visits yield multifaceted benefits for both children and families during the early childhood period. Empirical evidence indicates that home-visit practices contribute significantly to children's cognitive, linguistic, and social development and enhance parents' awareness, parenting competencies, and engagement in the educational process (Bilukha et al., 2005; Kotake et al., 2023). Within the scope of home visit programs, home-based interventions are

<sup>1</sup> İnönü University, Faculty of Education, Special Education Department, Malatya, Türkiye, e-mail: [ahmetilkhan.yetkin@inonu.edu.tr](mailto:ahmetilkhan.yetkin@inonu.edu.tr), ORCID: <https://orcid.org/0000-0003-1199-7283>

<sup>2</sup> İnönü University, Faculty of Education, Special Education Department, Malatya, Türkiye, e-mail: [ozlem.yagcioglu@inonu.edu.tr](mailto:ozlem.yagcioglu@inonu.edu.tr), ORCID: <https://orcid.org/0000-0001-7355-0984>

<sup>3</sup> Gazi University, Gazi Faculty of Education, Special Education Department, Ankara, Türkiye, e-mail: [furkanakdag@gazi.edu.tr](mailto:furkanakdag@gazi.edu.tr), ORCID: <https://orcid.org/0000-0003-2879-6891>

structured, professionally designed activities implemented in the child's natural environment to address individual developmental needs (Tomris & Çelik, 2021).

Such interventions not only foster children's development but also empower families by enhancing their knowledge, skills, and self-efficacy. Through components such as parent education, psychosocial support, developmental assessment, home-environment structuring, and family counseling, these programs transform parents from passive recipients of services into active partners in their child's development (Erdemir, 2022; McBride & Petterson, 1997; Wasik & Bryant, 2000). Moreover, home-based interventions have been found to strengthen teacher–family communication, enhance family participation in educational decision-making, and promote children's motivation to learn. Consequently, home visits are increasingly recognized as an essential component of a family-centered, holistic approach in early childhood special education.

Home-based interventions are typically implemented by professionals in collaboration with families within the child's natural living environment. In this context, home visits are among the most common and effective modalities in early childhood special education practice. Home–visit–based programs constitute a multidisciplinary intervention approach in which professionals such as teachers, psychologists, special education specialists, social workers, and healthcare providers engage directly with families to support children's developmental progress (Bock et al., 2021; Toran & Özgen, 2019). During these visits, professionals not only deliver individualized, play-based educational activities tailored to the child's needs but also provide developmental guidance, informational support, observational feedback, and parent coaching (Bock et al., 2021; Peterson et al., 2007).

Through these interactions, parents are encouraged to recognize their children's strengths, understand their developmental needs, and create enriched learning opportunities integrated into daily routines. Furthermore, home visits enhance parents' ability to interact with their children in a more conscious and meaningful way, thereby supporting the integration of family participation into the educational process (Orum-Çattık et al., 2021; Sweet & Appelbaum, 2004). Ultimately, home visits function not only as a teaching strategy but also as a mechanism for family empowerment that strengthens collaborative partnerships between teachers and families within early childhood intervention systems. From an ecological perspective, home visits can be understood as practices that enhance the alignment and continuity between children's primary developmental contexts, particularly the home and educational environments. In Bronfenbrenner's ecological systems theory, such practices strengthen the child's mesosystem by creating purposeful connections between daily family routines and educational goals (Bronfenbrenner, 1979; Bronfenbrenner & Morris, 2007). Similarly, family-centered intervention frameworks emphasize that empowering caregivers through shared decision-making, sensitivity to family priorities, and the use of natural learning opportunities support more sustainable and contextually meaningful developmental outcomes (Dunst, 2002; Sheridan et al., 2010). When evaluated from an ecological and family-centered perspective, home visits provide a structured opportunity to translate contextual information into collaborative educational planning, rather than merely serving as relational encounters.

Research in the field indicates that home visits not only provide developmental support for children but also strengthen the parent–child relationship, enhance parental responsiveness, and yield long-term positive outcomes in children's academic, social, and emotional adjustment (Edwards et al., 2020; Grantham-McGregor et al., 2020). These findings suggest that home visits serve as an effective mechanism for implementing family-centered approaches within early intervention frameworks.

Particularly in special needs contexts such as autism spectrum disorder (ASD), home-based interventions have been shown to produce significant improvements in children's communication, joint attention, social engagement, and behavioral regulation skills (Bierman et al., 2017). The benefits of such interventions extend beyond observable symptom reductions; they also empower parents to feel more competent, supportive, and engaged in the instructional process. Thus, home visits emerge as a multidimensional and sustainable model for fostering collaborative partnerships among children, families,

and professionals in early childhood special education.

In Türkiye, both research findings and the Special Education Services Regulation (Ministry of National Education [MoNE], 2018) indicate that although home visits are formally recognized within the national special education framework, their implementation remains limited and inconsistent. Existing studies reveal that teachers generally hold positive attitudes toward home visits, viewing them as an effective means of fostering collaboration with families. However, they also report a range of practical challenges, including difficulties related to program management, transportation, time constraints, continuity of family participation, and insufficient institutional support (Mengi & Alpdoğan, 2020; Yıldırım-Parlak, 2024).

These findings highlight that while home visits hold considerable potential for integration into early childhood special education in Türkiye, their sustainability is hindered by structural and logistical barriers. Therefore, understanding teachers' experiences and perceptions regarding home visits may provide valuable insights for improving both policy and practice in the field. Accordingly, the present study aims to explore the content, implementation practices, and teacher perspectives on home visits conducted with children with special needs during early childhood.

To achieve this aim, the study seeks to answer the following research questions:

1. What are the functions of home visits for children with special needs during early childhood, and how are these functions reflected in the educational process?
2. How do teachers who conduct home visits with children with special needs in early childhood perceive the effectiveness, strengths, and limitations of these practices?

### **Method**

The present study aims to explore in depth the content, implementation practices, and teachers' perspectives on home visits conducted with children with special needs during early childhood. In line with this purpose, a qualitative case study design was employed. The case study approach seeks to examine a specific phenomenon, program, or process within its real-life context, providing a holistic and multidimensional understanding of the situation under investigation (Tardi, 2019; Yin, 2003). This design was deemed appropriate because it enables in-depth exploration of teachers' lived experiences and perceptions of home-visit practices in natural educational settings.

Case studies have been categorized in various ways within the literature (Baron & McNeil, 2019; Merriam, 2009; Yin, 2003). Drawing on the typology proposed by Baron and McNeil (2019), the current research was conducted as an instrumental case study. An instrumental case study focuses on an in-depth analysis of a single case in order to gain a broader understanding of a specific phenomenon, rather than to achieve generalization (Wellner & Pierce-Friedman, 2019). Accordingly, the selected case in this study served as a means to deepen the understanding of teachers' experiences with home visits and to contribute to the theoretical knowledge base of early childhood special education.

This methodological choice was particularly well-suited to the aims of the current research for several reasons. First, home visit practices in early childhood special education are complex, context-dependent, and shaped by multiple ecological factors such as family dynamics, teacher–parent interactions, and children's individual needs. An instrumental case study provides the flexibility and depth needed to capture these multilayered dynamics in their natural context, rather than reducing them to isolated variables. Second, teachers' perceptions and decision-making processes during home visits often involve tacit knowledge, professional judgment, and situational adaptations that cannot be meaningfully understood through standardized or large-scale quantitative approaches. The case study design allows these nuanced, experience-based insights to emerge organically through rich descriptions and thick data. Third, because home visits are implemented differently across educational settings, cultures, and service delivery models, an in-depth inquiry into a single bounded system offers the opportunity to illuminate how broader principles of early childhood special education manifest in practice. Finally, this approach

aligns with the study's aim of contributing to theoretical understanding rather than generalizing to larger populations. By closely examining a single case in detail, the research can reveal patterns, tensions, and contextual factors that inform both practice and future research on home-visit implementation in early childhood special education.

## **Data Collection Instruments**

### *A Semi-Structured Interview Form*

It was employed as the primary data collection tool in this study. The form was developed to conduct in-depth interviews with teachers in early childhood special education who actively participated in home-visit practices. The development of the interview form was guided by the research's overall purpose and specific research questions. Initially, the researchers drafted a pool of potential interview questions, which were reviewed and refined based on theoretical considerations and relevant literature to ensure conceptual clarity and content relevance.

Following the revision process, the final version of the interview form comprised five main questions and six probing (follow-up) questions, totaling eleven items. The draft interview form was evaluated by an associate professor specializing in special education and a qualitative research expert, who assessed the instrument for scope, linguistic clarity, and appropriateness. Revisions were made in line with the experts' feedback. Subsequently, pilot interviews were conducted with two teachers to examine the clarity, flow, and consistency of the questions. The insights gained from these pilot interviews were used to finalize the form before data collection. Throughout the development and pilot phases, ethical principles—including participant confidentiality, voluntary participation, and informed consent—were strictly observed.

The semi-structured interview format was chosen because it enables the collection of rich, nuanced, and experiential data, which aligns with the exploratory nature of this study. Home visit practices involve teachers' personal judgments, emotional experiences, professional decision-making processes, and interactions with families—elements that cannot be adequately captured through structured or closed-ended tools. The flexibility of semi-structured interviews allows researchers to follow participants' narratives, probe more deeply when needed, and uncover meanings that may not emerge from predetermined questions alone. Moreover, because the study aims to understand teachers' lived experiences in real-life contexts, this tool enables the elicitation of detailed examples, reflections, and context-specific insights. Ultimately, the semi-structured format supports a balance between systematic inquiry and participant-driven responses, making it particularly well-suited to investigating complex educational practices, such as home visits.

### *Field Notes*

The second data collection tool utilized in the study was field notes. During each interview session, the second and third researchers documented detailed observations regarding participants' non-verbal reactions, emotional expressions, and contextual features of the interview environment, as well as their own reflections as observers. These notes served as supplementary and corroborative data sources alongside the semi-structured interview form. The primary purpose of maintaining field notes was to ensure data triangulation, thereby enhancing the credibility and trustworthiness of the findings. In addition, recording contextual and behavioral cues—such as participants' tone, gestures, facial expressions, and situational dynamics—contributed to a richer interpretation of the qualitative data. Thus, field notes served as a reflective tool that supported the objectivity of the research process and facilitated a more nuanced understanding of teachers' experiences.

Field notes were included in the study because interviews alone cannot fully capture the subtleties and contextual dynamics of participants' experiences. Teachers' accounts of home visits may be complemented—or at times contradicted—by their emotional expressions, hesitation, excitement, or discomfort during the interview process. Such non-verbal indicators provide valuable interpretive depth that strengthens the accuracy and authenticity of qualitative findings. Furthermore, home-visit practices are inherently relational and sensitive, involving interactions with families, children, and home

environments; thus, understanding teachers' perspectives requires attention not only to their verbal statements but also to the affective and situational cues that accompany those statements. Field notes also enhance methodological rigor by contributing to data triangulation, providing an audit trail, and reducing potential researcher bias through reflexive documentation. For these reasons, field notes constitute an essential complement to achieving a holistic and credible understanding of teachers' experiences with home visits.

### Data Collection and Analysis

Data were collected through face-to-face and online semi-structured interviews, conducted at mutually agreed-upon times. Prior to each interview, the purpose of the study was explained, informed consent was obtained, and only participants who agreed to audio recording were interviewed. All interviews were conducted in accordance with ethical guidelines, ensuring participant confidentiality. Following the interviews, a member checking procedure was implemented. Summaries of individual interviews were sent to consenting participants, who were asked to confirm their accuracy. To ensure transcription reliability, an independent expert who was not part of the research team listened to a randomly selected audio recording and compared it with the written transcript, completing a verification form. In total, 150 minutes of audio data were transcribed in Times New Roman, 12-point font, with 1.5 line spacing, yielding 54 pages of qualitative data for analysis.

The data were analyzed using thematic analysis, a systematic method for identifying, organizing, and interpreting patterns of meaning (themes) within qualitative data (Braun & Clarke, 2006). Initially, all transcripts were uploaded to MAXQDA 2024 for coding and thematic categorization. Two researchers independently coded three randomly selected transcripts and then collaborated to ensure inter-coder reliability through regular calibration meetings. Codes with conceptual similarities were grouped to form subthemes and overarching themes. At the end of the analysis, 80 codes, 8 subthemes, and 4 main themes were identified. This analytic process enabled the extraction of meaningful patterns from the data and provided a comprehensive understanding of teachers' experiences with home visits in early childhood special education.

### Participants

A total of 10 teachers participated in the study, comprising 5 females and 5 males. Regarding their professional backgrounds, three were preschool teachers, while seven were special education teachers. In terms of institutional settings, six teachers were employed in special education preschools, two in special education application schools, and two in Guidance and Research Centers (GRCs). Participants were recruited through direct contact with schools and institutions, following preliminary meetings with teachers in early childhood special education settings. Following these initial meetings, teachers who expressed voluntary interest were provided with detailed information about the study, and only those who gave informed consent were included in the participant group. To increase the contextual breadth of the study and better reflect the diversity of home-visit practices within Türkiye, the sample was drawn from four geographic regions. In addition, particular attention was paid to selecting participants with prior experience working in special education preschools and conducting home visits as part of early childhood special education services. Participants were selected using purposive sampling, which enables the inclusion of individuals with specific characteristics relevant to the research purpose. The diversity of participants' institutional backgrounds and geographic representation enabled a comparative understanding of teachers' experiences with home visits across different educational contexts in Türkiye, while also strengthening the transparency of the sampling process and its ethical grounding.

**Table 1**  
*Participant Information*

Gender	Field	Institution
Female	Special Education Teacher	Special Education Preschool
Female	Special Education Teacher	Special Education Preschool
Female	Special Education Teacher	Special Education Preschool

Female	Special Education Teacher	Special Education Implementation School
Female	Special Education Teacher	Guidance Research Center
Male	Special Education Teacher	Special Education Preschool
Male	Special Education Teacher	Special Education Preschool
Male	Special Education Teacher	Special Education Preschool
Male	Special Education Teacher	Guidance Research Center
Male	Special Education Teacher	Special Education Implementation School

### **Credibility, Dependability, and Reflexivity**

Qualitative research inherently seeks to capture the meanings individuals assign to their experiences within specific contexts. Accordingly, validity and reliability are established through the broader framework of trustworthiness, which comprises the criteria of credibility, transferability, dependability, and confirmability (Guba, 1981). To ensure credibility, several strategies were implemented. Throughout the interviews, field notes were taken and used as complementary data to support the interview transcripts. The research team conducted peer debriefing sessions to discuss data interpretations and verify the internal coherence of the findings. Moreover, member checking was conducted by sending participants summarized transcripts for confirmation of accuracy.

To enhance dependability, two researchers independently coded three randomly selected transcripts. Regular meetings were held to discuss discrepancies and reach consensus, ensuring a high level of inter-coder agreement (Miles & Huberman, 1994). To strengthen confirmability, multiple data sources—including interview recordings, field notes, and document analyses—were utilized to achieve data triangulation. Additionally, an external expert reviewed the alignment between codes, themes, and interpretations, and the findings were compared with existing literature (Mauthner & Doucet, 2003). Throughout the study, the researchers maintained a reflexive stance, acknowledging and minimizing the potential influence of their assumptions on the research process. A standardized interview protocol was employed across all sessions to ensure procedural consistency. After the interviews, participants were provided with summaries of their transcripts for verification of accuracy. Collectively, these measures enhanced the study's credibility, methodological rigor, and overall trustworthiness.

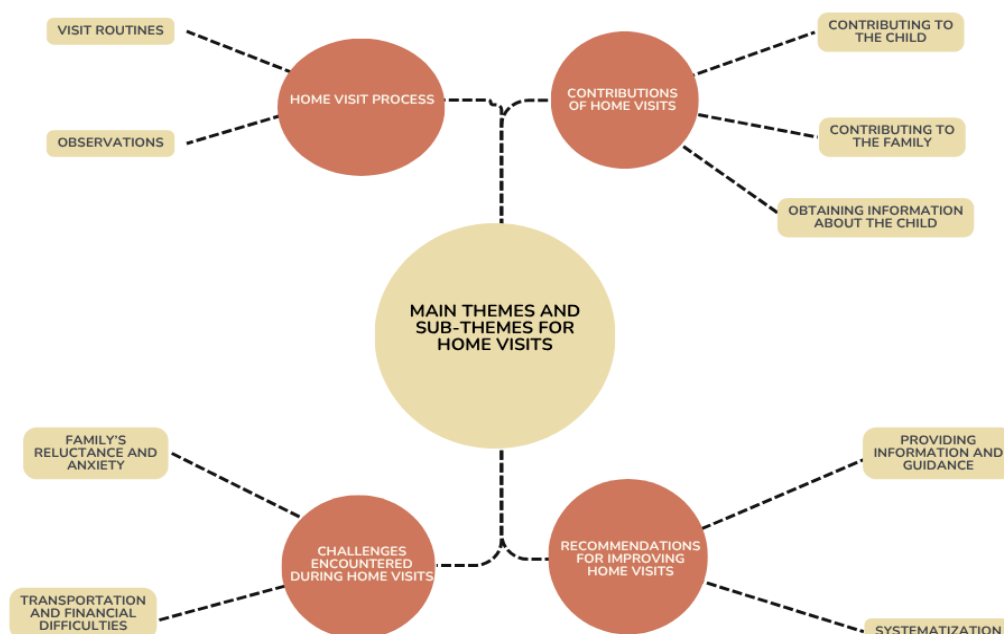
Expanding on these procedures, the adoption of these trustworthiness strategies was particularly critical given the complex, context-dependent nature of home-visit practices in early childhood special education. Ensuring credibility required not only verifying participants' accounts but also accurately representing their lived experiences as they unfold within intimate family environments and highly individualized educational contexts. Peer debriefing and member checks allowed the research team to validate emerging interpretations, reduce researcher bias, and ensure that findings authentically reflected teachers' perspectives. Dependability practices—such as independent coding and consensus meetings—were essential for maintaining consistency in the derivation of meaning units, codes, and themes, particularly given the exploratory nature of the study. Confirmability was further reinforced by systematic triangulation across interviews, field notes, and relevant documents, ensuring that interpretations were anchored in the data rather than in subjective assumptions. Reflexivity played a central role throughout the process, as researchers continuously monitored how their professional backgrounds, expectations, and prior experiences could shape their interpretation of home-visit practices. These methodological strategies were employed to enhance the study's trustworthiness and to establish credibility, transferability, dependability, and confirmability in the analysis of early childhood special education data.

### **Findings**

In this study, nine subthemes and four main themes related to home visits in early childhood special education were identified. As a result of the analysis, the subthemes were grouped under the corresponding main themes. In general, it was determined that the four main themes included: "Activities Conducted During Home-visits," which encompasses the practices carried out during home visits; "Functional Contributions of Home Visits," which focuses on the benefits of home visits for both children and families; "Challenges Encountered During Home Visits," which reveals the difficulties experienced

during the visits; and “Recommendations for Improving Home Visits,” which includes suggestions for making home visits more systematic and effective. Detailed findings for these main themes and subthemes are presented in Figure 1.

**Figure 1**  
Theme Sub-Theme



### Theme 1. Home Visit Process

Within this theme, two subthemes reflecting the functioning of teachers' home-visit processes emerged: “visit routines” and “observations.” When the subthemes and main theme were examined, it was observed that teachers conducted home visits according to a set routine. Teachers communicated with families prior to home visits, conducted visits at least twice a year, and stated that this practice was also mandated by law. Teachers indicated that home visits were typically scheduled during meetings held at the beginning of the school year. During the visit process, teachers communicated directly with families and noted that they scheduled appointments by informing families of the topic in advance. One teacher expressed this situation as follows:

...We talk according to the parents' availability. We discuss in advance which topics and situations we will address (T3).

However, teachers stated that they did not implement any intervention program or systematic teaching plan during home visits; instead, the process was generally carried out through observation and question-and-answer in a spontaneous manner. One teacher's opinion on this matter was as follows:

...You know, we go there and proceed like that. It develops as a mutual conversation, in the form of questions and answers, spontaneously... We take additional notes on the important points we observe and add our own opinions using the family interview form (T4).

Overall, these findings suggest that home visits in early childhood special education largely function as informal, flexible practices centered on communication and observation rather than on structured instructional planning, reflecting a need for more systematic guidance and pedagogical framing in implementation.

## Theme 2. Main Theme: The Contributions of Home Visits

Teachers reported that home visits provided benefits for themselves, families, and children. Upon examination of these views, three subthemes emerged: “obtaining information about the child,” “contributing to the child,” and “contributing to the family.” According to teachers, home visits offer significant advantages: they allow teachers to become familiar with the child’s living environment and help them obtain clearer, more objective information about the student’s actual performance. One teacher expressed this as follows:

Teacher, for example, we observe behaviors such as... Do the behaviors that the child develops at school continue at home as well? Or are the coercive interaction patterns with parents, for instance? (T7).

Teachers stated that they could observe their students’ real performance more effectively during home visits and, based on these observations, made adjustments to individualized education plans. They also mentioned that they gained more concrete insights into behaviors that challenge in specific contexts and reshaped the educational process accordingly. One teacher described this process as follows:

...Teacher, spiritually and educationally... when you see the child’s home environment, you can make a better plan. For example, you realize that the child doesn’t have a room of their own...(T3).

Teachers also emphasized that the contributions of home visits extended beyond educational benefits to psychological support and communication with families. It was emphasized that home visits strengthened communication and collaboration with families and that families reported greater psychological comfort as a result. One teacher expressed this view as follows:

...Regarding the family, sometimes there are problems they experience through the child, or between spouses, or even in a broader sense. When these are discussed, I have observed that they feel relieved. Talking to someone about these issues can make them feel better (T10).

Taken together, these reflections indicate that home visits function as a multidimensional support mechanism that not only enriches teachers’ instructional planning but also enhances child outcomes and strengthens family–school partnerships, underscoring their critical role in holistic early childhood special education practices.

## Theme 3. Challenges Encountered During Home Visits

The difficulties teachers encountered during home visits were examined under two subthemes: “reluctance and anxiety” and “transportation and economic challenges.” Teachers reported that families were reluctant throughout the home-visit process, which led to difficulties scheduling appointments and conducting visits. It was noted that some teachers and specialists exhibited prejudiced attitudes and criticism, which were cited as the primary reasons for this reluctance. In addition, according to the teachers, external factors such as families’ anxieties about having their home environment observed and the child’s actual circumstances, as well as worries such as “I may be criticized,” could lead to resistance to home visits. Furthermore, it was mentioned that gender differences might also influence family attitudes. A teacher expressed this situation as follows:

...As if making them appear guilty, and sometimes when we go for a home visit, there is this perception as if we are going to observe their faults...(T9).

Teachers also noted difficulties reaching families due to economic conditions and transportation barriers. It was stated that reaching some homes was particularly challenging under harsh weather conditions. One teacher expressed this situation as follows:

...For example, I work in the eastern region, and sometimes reaching a family’s home during winter conditions can be very difficult...(T2).

From a broader analytical perspective, these findings suggest that home visits are implemented within a framework of structural and relational constraints: while they hold substantial potential to support children and families, their effectiveness is undermined by families’ fears of being judged, power imbalances between professionals and parents, and socioeconomic and geographical barriers. The interplay of stigma, perceived surveillance, and logistical difficulties indicates that sustainable and

equitable home visit practices in early childhood special education require not only pedagogical planning but also sensitivity to family vulnerabilities, attention to contextual inequities, and institutional support mechanisms that mitigate these sources of resistance and burden.

#### **Theme 4. Improving Home Visits**

Teachers expressed diverse opinions on improving home visits and making them more effective. When these views were examined, two subthemes emerged: "providing information" and "systematization." Teachers emphasized that families should be informed about home visits. In this context, they emphasized the importance of meeting with families before visiting them and providing information about the purpose and scope of home visits. They also mentioned that informative brochures could be prepared to raise families' awareness about home visits. A teacher expressed this view as follows:

Teacher, for example... something could be prepared, like an informative brochure, for instance... (T8).

In addition, teachers stated that the home visit process should be more systematic. According to them, conducting home visits within a specific plan and program would improve the process's functionality. Teachers emphasized that not only the planning stages but also the implementation processes should become more structured. A teacher expressed this opinion as follows:

...To be carried out more efficiently, it needs to become a system, teacher. I think this should happen every year. Just as we hold parent meetings, I think parent visits should also be conducted in the same way (T7).

Overall, these suggestions indicate that teachers envision home visits as a formalized and collaborative component of early childhood special education, rather than as ad hoc or purely voluntary practices. By prioritizing clear, proactive communication with families and embedding home visits within a structured plan and policy framework, they highlight the need to transform home visits into a predictable, transparent, and pedagogically guided process. Such systematization, supported by preparatory information and ongoing family engagement, has the potential to reduce misunderstandings and resistance, enhance family participation, and more fully realize the developmental and educational benefits that home visits can provide for children with special needs.

### **Conclusion and Discussion**

The aim of this study was to explore the content, implementation practices, and teachers' perspectives regarding home visits conducted with children with special needs during early childhood. Based on the findings, four main themes were identified: the home-visit process, its contributions, the challenges encountered, and recommendations for improvement.

An examination of the findings revealed that teachers generally plan and implement home visits within a specific routine. This finding aligns with the Special Education Services Regulation (MoNE, 2018) in Türkiye, which mandates that home visits be carried out in a planned and organized manner. Teachers reported that they include home visits in their annual activity plans and implement them accordingly. However, the majority of teachers indicated that home visits are often conducted spontaneously and observationally rather than as structured interventions. They stated that there is no systematic instructional program or formalized plan guiding these visits. Similarly, studies by Peterson et al. (2007) and Tomris & Çelik (2021) emphasized that home visits should be implemented within a structured plan and supported by individualized educational approaches. The findings of the present study suggest that current practices deviate from the theoretical and programmatic framework recommended in the literature. Taken together, these findings illustrate a significant gap between policy-level expectations and actual implementation practices in the field. Although teachers formally integrate home visits into their annual plans, the lack of structured instructional content reflects a broader systemic challenge in operationalizing home-visit guidelines. Consistent with international research, the findings indicate that home visits are primarily used as relational and observational tools rather than as vehicles for targeted intervention, thereby limiting their potential impact on children's developmental and educational outcomes. Furthermore, the spontaneous nature of current practices suggests that teachers may require clearer procedural guidelines, professional

development opportunities, and institutional support to translate policy mandates into pedagogically meaningful actions.

This conclusion was derived from the discrepancy between teachers' reports of formally planning home visits and their simultaneous description of these visits as largely spontaneous, observation-based, and lacking structured instructional content. Within early childhood special education, the purpose of home visits extends beyond relationship-building to include translating ecological observations into individualized goals, family-guided teaching strategies, and continuity between home routines and educational objectives. When visits remain informal and non-systematic, this intended function is not fully realized, which explains the identified need for more systematic guidance and pedagogical framing in the implementation process. From an ecological perspective, this discrepancy limits the potential of home visits to function as intentional mechanisms that connect home and school contexts in meaningful and sustainable ways.

Within a theoretical framework, the divergence between recommended and actual practices underscores the need to enhance implementation fidelity of home-visit models in early childhood special education. Developing standardized yet flexible frameworks—supported by training, materials, and monitoring mechanisms—may help align practice with evidence-based approaches and enhance the overall effectiveness of home visits as an integral component of early intervention services.

At the same time, it is important to avoid overly rigid procedures that may constrain teachers' ability to capture incidental ecological information and build authentic relational connections with families. In this respect, the relational and observational nature of home visits should be recognized as a legitimate and often necessary foundation for later intervention planning, since such contextual insights may not be obtainable through school-based assessments alone

From a theoretical standpoint, the present findings gain greater explanatory power when interpreted through established ecological and family-centered frameworks (Dunst, 2002). Within Bronfenbrenner's ecological systems theory, home visits can be conceptualized as a mechanism that strengthens the child's mesosystem by intentionally linking the primary developmental contexts of home and school, thereby promoting greater coherence and continuity across everyday routines and educational practices (Bronfenbrenner, 1979). Within the ecological systems framework, children's development is shaped by ongoing, reciprocal interactions between the child and the multiple environments in which they participate. The microsystem refers to the immediate settings in which the child is directly involved, such as the home and the early childhood education environment, where daily routines, caregiving practices, and instructional interactions take place. The mesosystem, in turn, encompasses the dynamic relationships between these microsystems, highlighting the importance of coordination and consistency across contexts (Bronfenbrenner, 1979; Bronfenbrenner & Morris, 2007). From this perspective, home visits serve as a critical mesosystem-level practice by intentionally linking the family and school environments and facilitating reciprocal information exchange between teachers and caregivers. Rather than functioning as isolated encounters, home visits enable educators to observe children within their natural routines, align educational goals with family practices, and support continuity between home-based experiences and school-based learning. Such alignment is particularly important in early childhood special education, where fragmented services and weak home-school connections may limit the effectiveness of individualized intervention efforts. The importance of these reciprocal connections can be further understood through a transactional systems perspective, which conceptualizes child development as the

From a theoretical standpoint, the present findings gain greater explanatory power when interpreted through established ecological and family-centered frameworks (Dunst, 2002). Within Bronfenbrenner's ecological systems theory, home visits can be conceptualized as a mechanism that strengthens the child's mesosystem by intentionally linking the primary developmental contexts of home and school, thereby promoting greater coherence and continuity across everyday routines and educational practices (Bronfenbrenner, 1979). Within the ecological systems framework, children's development is shaped by ongoing, reciprocal interactions between the child and the multiple environments in which they

participate. The microsystem refers to the immediate settings in which the child is directly involved, such as the home and the early childhood education environment, where daily routines, caregiving practices, and instructional interactions take place. The mesosystem, in turn, encompasses the dynamic relationships between these microsystems, highlighting the importance of coordination and consistency across contexts (Bronfenbrenner, 1979; Bronfenbrenner & Morris, 2007). From this perspective, home visits serve as a critical mesosystem-level practice by intentionally linking the family and school environments and facilitating reciprocal information exchange between teachers and caregivers. Rather than functioning as isolated encounters, home visits enable educators to observe children within their natural routines, align educational goals with family practices, and support continuity between home-based experiences and school-based learning. Such alignment is particularly important in early childhood special education, where fragmented services and weak home-school connections may limit the effectiveness of individualized intervention efforts. The importance of these reciprocal connections can be further understood through a transactional systems perspective, which conceptualizes child development as the product of continuous, bidirectional interactions among the child, caregivers, and broader environmental systems (Sameroff, 2009). Within this model, changes in one component of the system—such as caregiver practices or educational expectations—can influence other components over time. Home visits, when grounded in ecological and family-centered principles, create structured opportunities for such transactional processes by supporting shared understanding, mutual adaptation, and coordinated action between families and educational professionals. In this sense, the effectiveness of home visits depends not solely on individual teacher practices but on their capacity to function as integrative mechanisms within a broader home-school system that jointly supports children's development.

In parallel, family-centered intervention frameworks position home visits as a relational and participatory practice grounded in collaborative partnerships, shared decision-making, and responsiveness to family priorities and cultural values (Dunst & Trivette, 2009). Viewed through these perspectives, the findings suggest that when home visits are enacted predominantly as informal, observation-oriented encounters, their capacity to operate as theoretically grounded vehicles for ecological intervention and family empowerment may remain underutilized (Sheridan et al., 2010). Conversely, systematically structured home visits—supported by clear procedural guidance and professional preparation—may enhance teachers' ability to translate contextual insights into individualized goals, strengthen bidirectional collaboration, and support families as active agents within early intervention. In this way, anchoring home visit practices within ecological and family-centered theoretical traditions not only clarifies the conceptual contribution of the study but also highlights the conditions under which home visits can more effectively contribute to sustainable, contextually responsive, and developmentally meaningful outcomes for young children with special needs (Bronfenbrenner & Morris, 2007; Meyer & Man, 2006; Turnbull et al., 2015).

Product of continuous, bidirectional interactions among the child, caregivers, and broader environmental systems (Sameroff, 2009). Within this model, changes in one component of the system—such as caregiver practices or educational expectations—can influence other components over time. Home visits, when grounded in ecological and family-centered principles, create structured opportunities for such transactional processes by supporting shared understanding, mutual adaptation, and coordinated action between families and educational professionals. In this sense, the effectiveness of home visits depends not solely on individual teacher practices but on their capacity to function as integrative mechanisms within a broader home-school system that jointly supports children's development.

Teachers' views revealed that home visits contribute to a deeper understanding of children's developmental characteristics and enable more effective structuring of individualized educational plans. This result is consistent with the findings of Bilukha et al. (2005), Wasik & Bryant (2000), and Edwards et al. (2020), who highlighted the value of home-based interventions in assessing children within their natural environments. Moreover, teachers reported that home visits strengthen communication and collaboration with families, fostering more supportive and cooperative relationships. Similarly, Sweet and Appelbaum (2004) found that home visits enhance communication and partnership between families and professionals. Together, these converging findings suggest that home visits function as a unique bridge between

educational settings and children's natural routines, providing teachers with ecological insights that cannot be captured through school-based observations alone. The alignment between the present study and previous literature underscores the potential of home visits to inform more responsive and contextually grounded intervention plans. Additionally, the emphasis on improved family–teacher communication highlights the relational dimension of home visits, which is central to effective early childhood special education. Strengthening trust, enhancing family engagement, and supporting shared decision-making all contribute to more holistic and sustainable educational outcomes. However, these benefits also point to the need for structured frameworks and professional training that can help teachers maximize the developmental and relational advantages of home visits. In this sense, the findings reinforce the argument that home visits, when systematically integrated into early intervention practices, hold substantial promise for promoting both child-centered learning and family empowerment. However, it is also important to acknowledge that home visits may not be uniformly beneficial across all contexts and families. Even when teachers report positive outcomes, home visits can inadvertently create pressure on families, raise privacy concerns, or intensify feelings of being evaluated—particularly in vulnerable households or when mutual trust has not yet been established (Mengi & Alpdoğan, 2020; Yıldırım-Parlak, 2024). In addition, inconsistencies in implementation, time constraints, and limited institutional resources may reduce the sustainability and effectiveness of home visits, suggesting that their impact is highly dependent on contextual readiness and system-level support.

Despite these positive contributions, several challenges were identified in implementing home visits. Factors such as families' reluctance, concerns about privacy, and lack of trust toward teachers were found to hinder the planning and execution of visits. These challenges are consistent with findings reported by Mengi & Alpdoğan (2020) and Yıldırım-Parlak (2024) in the Turkish context. Additionally, transportation difficulties and financial constraints were also identified as significant barriers that negatively affect the sustainability of home visit practices. These challenges collectively indicate that home visits, while pedagogically valuable, operate within a complex ecosystem shaped by sociocultural dynamics, institutional limitations, and socioeconomic disparities. Families' hesitation and privacy concerns point to underlying issues of stigma, perceived power imbalances, and fears of being judged—factors that diminish their readiness to collaborate with educators. Such relational barriers underscore the need for culturally responsive communication strategies and trust-building practices that can reduce anxiety and promote more open engagement. Likewise, the practical difficulties related to transportation and financial limitations reveal the structural inequities that particularly affect rural and economically disadvantaged regions, making consistent implementation difficult even for highly motivated teachers. These findings highlight the importance of developing policy-level supports—such as transportation allowances, flexible scheduling mechanisms, and institutional guidance—to enhance the feasibility and sustainability of home visits. Ultimately, addressing both relational and structural barriers is critical to ensuring that home visits can fully achieve their intended role as equitable, family-centered, and contextually meaningful components of early childhood special education.

Findings further indicated that teachers need systematic planning frameworks and informative materials for families to conduct home visits more effectively. This aligns with the systematic intervention models proposed by Wasik & Bryant (2000) and McBride & Petterson (1997). In this regard, teachers suggested that home visits should be institutionalized as a school policy, supported by guidelines and manuals for teachers, and complemented by informational resources for families. Taken together, these findings suggest that the effectiveness of home visits depends not only on teachers' individual efforts but also on the existence of institutional infrastructures that guide, regulate, and sustain the process. The alignment with established models in the literature highlights the importance of structured, evidence-based frameworks that delineate clear roles, expectations, and procedural steps for both educators and families. When supported by institutional policies, standardized manuals, and accessible informational materials, home visits can move beyond fragmented and ad hoc practices to become coherent components of early intervention systems. Such systematization also facilitates consistency across teachers and schools, enhances fidelity to recommended practices, and strengthens the capacity of families to engage

meaningfully in the process. From a policy and practice standpoint, the findings underscore the need for multi-level support—ranging from administrative leadership to resource development—to ensure that home visits are implemented in ways that reflect their pedagogical value and maximize their potential impact on children's development and family-school collaboration.

In conclusion, home visits conducted with children with special needs during early childhood represent a critical practice for assessing children's developmental needs in their natural environments, strengthening family-teacher collaboration, and enhancing individualized education planning. However, to make this process more functional and sustainable, it is essential to establish systematic implementation procedures, ensure comprehensive family orientation, and provide supportive resources for teachers.

Given that home visits are formally embedded within Türkiye's national special education framework, the findings also provide a direct takeaway for policy and system-level decision-makers. In particular, the gap observed between planned implementation requirements and the largely informal, observation-based practices reported by teachers highlights the need to translate regulatory expectations into clearer operational standards and implementation supports. Strengthening procedural guidance, institutional accountability, and resource mechanisms may therefore increase the feasibility, consistency, and sustainability of home visits in early childhood special education settings in Türkiye (MoNE, 2018).

These steps would improve both the quality and the effectiveness of home-visit practices in early childhood special education. Overall, the findings of this study highlight the dual nature of home visits as both an opportunity and a challenge within early childhood special education. While the practice holds substantial potential to enhance ecological assessment, deepen pedagogical insight, and foster strong family partnerships, its impact is constrained when implementation relies solely on individual teacher initiative rather than structured institutional support. Therefore, strengthening policy frameworks, enhancing professional development, and equipping families with clear, accessible information are essential to improving the effectiveness of home-visit practices. Addressing these areas can ensure that home visits evolve into consistent, equitable, and evidence-based practices that meaningfully contribute to children's developmental progress and to the broader goal of inclusive, family-centered early education systems.

### **Limitation and Further Research Implications**

Although this study was designed as a qualitative inquiry and therefore does not aim for statistical generalization, certain limitations should be acknowledged. Although data were collected from participants working in four regions of Türkiye, all participants were employed in special education kindergartens throughout their professional lives. This common professional context, while enabling an in-depth, multifaceted examination of home-visit practices from an early childhood special education perspective, may have constrained the diversity of institutional viewpoints represented.

In addition, the study relied on teachers' self-reported experiences, which may reflect subjective interpretations of practice. In addition, although field notes supported the documentation of contextual details during data collection, they may also entail interpretive limitations. Field notes are inherently shaped by the researcher's observational focus and analytic lens, which may influence what is recorded and how events are represented. Therefore, while they enrich qualitative depth, they may not fully capture all interactional nuances and may reflect selective emphasis based on the researcher's perspective. Future studies may enhance trustworthiness by including participants from a wider range of institutional settings and by incorporating multiple data sources, such as family perspectives or direct observations, to further enrich the understanding of home-visit practices.

Overall, the present study makes an original contribution by foregrounding home visit practices within early childhood special education in Türkiye—a context that remains comparatively underrepresented in the international literature—and by capturing teachers' firsthand perspectives through an in-depth qualitative lens. Beyond documenting common benefits and challenges, the study uniquely highlights the persistent gap between policy-level expectations and the realities of

implementation, thereby offering a contextually grounded understanding of why home visits often remain informal and observation-based rather than intervention-oriented. In addition, by theoretically positioning home visits within ecological and family-centered perspectives, the findings extend existing discussions by illustrating how home visits can function not only as relational tools but also as mechanisms for strengthening home–school continuity and supporting family participation in early intervention. In practice, the study provides actionable guidance by identifying the need for standardized yet flexible planning frameworks, institutional resources, and family-oriented materials to improve both feasibility and fidelity. Taken together, these contributions advance the field by integrating theoretical interpretation, contextual specificity, and practice-focused recommendations, offering a more comprehensive understanding of how home visits can be strengthened as equitable and evidence-informed components of early childhood special education.

Moreover, the implications of this study can be more explicitly situated within both national and international early childhood special education policy orientations that emphasize inclusion, coordinated service delivery, and family participation. At the national level, the planned nature of home visits reported by teachers is consistent with Türkiye’s Special Education Services Regulation, which frames educational support services as processes that should be organized and systematically implemented (MoNE, 2018). At the international level, the teachers’ calls for systematizing home visits, strengthening family communication, and ensuring institutional support align closely with established early intervention principles that prioritize family-centered practices, collaborative partnerships, and coordinated planning. In line with this perspective, UNICEF’s multi-sectoral approach to early childhood intervention underscores that family-centered systems require coherent policies, implementation guidelines, qualified personnel standards, and sustainable infrastructures (UNICEF, 2022). Such policy components closely parallel the recommendations emerging from the present study regarding structured manuals, institutional frameworks, and resource provision, which are also emphasized as key system-building elements in broader guidance on strengthening early childhood intervention systems (Tolan et al., 2023). Accordingly, these findings offer practical value by identifying concrete leverage points for guideline development, teacher training, and school-level implementation supports, thereby strengthening the alignment between everyday home-visit practices and broader policy aims to build inclusive, equitable, and family-responsive early childhood special education services.

## Declarations

### *Authors’ Declarations*

**Acknowledgements:** The research was presented at the 8th International Early Childhood Intervention Congress held in 2025.

**Authors’ contributions:** All authors contributed equally to this study.

**Competing interests:** The authors declare that they have no competing interests.

**Funding:** This research was supported by Inonu University’s scientific research projects (Project No: SHD-2025-3992) between May 12, 2025, and January 29, 2026

**Ethics approval and consent to participate:** This research has been deemed ethically acceptable by the İnönü University Social and Human Sciences Scientific Research and Publication Ethics Committee in its decision dated 06-03-2025 numbered 5/2.

### *Publisher’s Declarations*

**Editorial Acknowledgement:** The editorial process of this article was completed under the editorship of Dr. Eleonora Teszenyi through a double-blind peer review with external reviewers.

**Publisher’s Note:** Journal of Childhood, Education & Society remains neutral with regard to jurisdictional claims in published maps and institutional affiliation.

## References

Baron, A., & McNeal, K. (Eds.). (2019). *Case study methodology in higher education*. IGI Global. <https://doi.org/10.4018/978-1-5225-9429-1>

- Bierman, K., Heinrichs, B., Welsh, J., Nix, R., & Gest, S. (2017). Enriching preschool classrooms and home visits with evidence-based programming: sustained benefits for low-income children. *Journal of Child Psychology and Psychiatry*, 58, 129–137. <https://doi.org/10.1111/jcpp.12618>.
- Bilukha, O., Hahn, R., Crosby, A., Fullilove, M., Liberman, A., Mościcki, E., Snyder, S., Tuma, F., Corso, P., Schofield, A., & Briss, P. (2005). The effectiveness of early childhood home visitation in preventing violence: a systematic review. *American Journal of Preventive Medicine*, 28(2), 11-39. <https://doi.org/10.1016/j.AMEPRE.2004.10.004>.
- Bock, M. J., Kakavand, K., & Careaga, D. (2021). Shifting from in-person to virtual home visiting in Los Angeles County: Impact on programmatic outcomes. *Maternal and Child Health Journal*, 25(7), 1025–1030. <https://doi.org/10.1007/s10995-021-03178-6>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Brentani, A., Walker, S., Chang-Lopez, S., Grisi, S., Powell, C., & Fink, G. (2021). A home visit-based early childhood stimulation programme in Brazil: A randomized controlled trial. *Health Policy and Planning*, 36(3), 305–315. <https://doi.org/10.1093/heapol/czaa195>
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.
- Bronfenbrenner, U., & Morris, P. A. (2007). The bioecological model of human development. In R. M. Lerner & W. Damon (Eds.), *Handbook of child psychology: Vol. 1. Theoretical models of human development* (6th ed., pp. 793–828). Wiley.
- Dunst, C. J. (2002). Family-centered practices: Birth through high school. *The Journal of Special Education*, 36(3), 141-149. <https://doi.org/10.1177/002246690203600304>
- Dunst, C. J., & Trivette, C. M. (2009). Capacity-building family-centered helping practices. *Journal of Family Social Work*, 12(2), 119–143. <https://doi.org/10.1080/10522150802713322>
- Duffee, J. H., Mendelsohn, A. L., Kuo, A. A., Legano, L. A., Earls, M. F., Council on Community Pediatrics, ... & Williams, P. G. (2017). Early childhood home visiting. *Pediatrics*, 140(3), e20172150. <https://doi.org/10.1542/peds.2017-2150>
- Edwards, R. C., Vieyra, Y., & Hans, S. L. (2020). Maternal support for infant learning: Findings from a randomized controlled trial of doula home visiting services for young mothers. *Early Childhood Research Quarterly*, 51, 26-38. <https://doi.org/10.1016/j.ecresq.2019.08.001>
- Erdemir, E. (2022). Home-based early education for refugee and local children via mothers: A model of contextually sensitive early intervention. *Journal of Child and Family Studies*, 31, 1121 - 1144. <https://doi.org/10.1007/s10826-021-02197-7>
- Guba, E. G. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries. *Educational Communication and Technology Journal*, 29(2), 75-91. <https://doi.org/10.1007/BF02766777>
- Grantham-McGregor, S., Adya, A., Attanasio, O., Augsburg, B., Behrman, J., Caeyers, B., Day, M., Jervis, P., Kochar, R., Makkar, P., Meghir, C., Phimister, A., Rubio-Codina, M., & Vats, K. (2020). Group sessions or home visits for early childhood development in India: A cluster RCT. *Pediatrics*, 146(6), e2020002725. <https://doi.org/10.1542/peds.2020-002725>
- Kotake, C., Fauth, R., Stetler, K., Goldberg, J., Silva, C., & Manning, S. (2023). Improving connections to early childhood systems of care via a universal home visiting program in Massachusetts. *Children and Youth Services Review*, 150, 106995. <https://doi.org/10.1016/j.childyouth.2023.106995>
- McBride, S., & Peterson, C. (1997). Home-Based Early Intervention with Families of Children with Disabilities. *Topics in Early Childhood Special Education*, 17(2), 209 - 233. <https://doi.org/10.1177/027112149701700206>
- Meyer, J. A., & Mann, M. B. (2006). Teachers' perceptions of the benefits of home visits for early childhood programs. *Early Childhood Education Journal*, 34(1), 93-97. <https://doi.org/10.1007/s10643-006-0113-z>
- Mengi, A., & Alpdoğan, Y. (2020). COVID-19 salgını sürecinde özel eğitim öğrencilerinin uzaktan eğitim süreçlerine ilişkin öğretmen görüşlerinin incelenmesi. *Milli Eğitim Dergisi*, 49(1), 413-437. <https://doi.org/10.37669/milliegitim.776226>
- Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. Jossey-Bass.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Sage.
- Orum Çattık, E., Yetkin, A. İ., & Aksoy, V. (2021). Ailelerin otizm spektrum bozukluğu olan çocuklarıyla gerçekleştirdikleri öğretimsel uyarlamalarına ilişkin fenomenolojik bir araştırma. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi*, 52, 464-491. <https://doi.org/10.9779/pauefd.833843>
- Peterson, C. A., Luze, G. J., Eshbaugh, E. M., Jeon, H. J., & Kantz, K. R. (2007). Enhancing parent-child interactions through home visiting: Promising practice or unfulfilled promise?. *Journal of Early Intervention*, 29(2), 119-140. <https://doi.org/10.1177/105381510702900205>
- Sameroff, A. J. (2009). *The transactional model of development: How children and contexts shape each other*. American Psychological Association. <https://doi.org/10.1037/11877-000>

- Sheridan, S. M., Knoche, L. L., Edwards, C. P., Bovaird, J. A., & Kupzyk, K. A. (2010). Parent engagement and school readiness: Effects of the Getting Ready intervention on preschool children's social-emotional competencies. *Early Education and Development*, 21(1), 125-156. <https://doi.org/10.1080/10409280902783517>
- Sweet, M. A., & Appelbaum, M. I. (2004). Is home visiting an effective strategy? A meta-analytic review of home visiting programs for families with young children. *Child Development*, 75(5), 1435-1456. <https://doi.org/10.1111/j.1467-8624.2004.00750.x>
- Tardi, S. (2019). Case study: Defining and differentiating among types of case studies. In A. Baron & K. McNeal (Eds.), *Case study methodology in higher education* (pp. 1-19). IGI Global. <https://doi.org/10.4018/978-1-5225-9429-1>
- UNICEF (2022). *Early childhood intervention (ECI): A multi-sectoral approach*. UNICEF. <https://www.unicef.org/eca/programme/early-childhood-intervention-and-inclusion>
- Ministry of National Education (2018). *Özel eğitim hizmetleri yönetmeliği [Special Education Services Regulation]*. <https://www.resmigazete.gov.tr/eskiler/2018/07/20180707-4.htm>
- Tollan, K., Jezrawi, R., Underwood, K., & Janus, M. (2023). A review on early intervention systems. *Current Developmental Disorders Reports*, 10(2), 147-153. <https://doi.org/10.1007/s40474-023-00274-8>
- Tomris, G., & Çelik, S. (2021). Erken çocukluk özel eğitimi: Kuramsal ve yasal temeller, dünyadaki ve Türkiye'deki son eğilimler. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Özel Eğitim Dergisi*, 22(1), 1-24. <https://doi.org/10.21565/ozelegitimdergisi.748893>
- Toran, M., & Özgen, Z. (2019). Family involvement in preschool education: What do teachers think and do?. *Journal of Qualitative Research in Education*, 6(3), 229-245. <https://doi.org/10.14689/issn.2148-2624.1.6c3s11m>
- Turnbull, A. A., Turnbull, H. R., Erwin, E. J., Soodak, L. C., & Shogren, K. A. (2015). *Families, professionals, and exceptionality: Positive outcomes through partnerships and trust* (7th ed.). Pearson.
- Wasik, B. H., & Bryant, D. M. (2001). *Home visiting: Procedures for helping families* (2nd ed.). Sage. <https://doi.org/10.4135/9781452225616>
- Wellner, L., & Pierce-Friedman, K. (2019). The types of case studies in research and career-based endeavors. In A. Baron & K. McNeal (Eds.), *Case study methodology in higher education* (pp. 83-108). IGI Global. <https://doi.org/10.4018/978-1-5225-9429-1.ch005>
- Yin, R. K. (2003). Designing case studies. *Qualitative Research Methods*, 5(14), 359-386.
- Yıldırım-Parlak, Ş. (2024). *Erken çocukluk döneminde özel gereksinimli çocuğu olan ebeveynlerin çocuklarına beceri öğretilmelerinde ev ziyareti uygulamasının etkililiği* [Unpublished doctoral dissertation]. Anadolu University.

# Nested ecologies of childhood: A microbial turn in developmental theory

Zsuzsa Millei<sup>1</sup>, Nick Lee<sup>2</sup>, Sarah Alminde<sup>3</sup>, Asta Breinholt<sup>4</sup>, Mira Grönroos<sup>5</sup>, Riikka Hohti<sup>6</sup>, Sami Keto<sup>7</sup>, Marja Roslund<sup>8</sup>, Spyros Spyrou<sup>9</sup>, Tuure Tammi<sup>10</sup>, Hanne Warming<sup>11</sup>, Juliene Madureira Ferreira<sup>12</sup>

**Abstract:** This article expands Bronfenbrenner's bioecological model by integrating biological and ecological processes—particularly microbial life—into its core concept of proximal processes. Drawing on host-microbiome research and the concept of the child-as-ecosystem, we reconceptualize the developing person as a multispecies being embedded within nested ecological systems. Through four interdisciplinary encounters—spanning social stratification, family separation, socialisation, and environmental health—we demonstrate how microbial diversity and ecological entanglements shape children's development, well-being, and learning. We argue that BEM's human-centered framework must evolve to reflect multispecies interdependencies and ecological realities, especially in the context of biodiversity loss and climate change. This rethinking has direct implications for early childhood education, research, and policy, offering a more ecologically attuned model of development.

## Article History

Received: 16 June 2025

Accepted: 13 October 2025

## Keywords

Childhood; Bronfenbrenner; Biodiversity; Ecosystem; Microbiome; Child development

## Introduction

Bronfenbrenner's (Bronfenbrenner, 1979) ecological model of child / human development is a key theory that addresses the process of development in interaction with the environment and within a series of nested environmental systems. Bronfenbrenner's theory has been highly influential in early childhood education. Its first major application was in the Head Start program, which shifted focus away from deficit-based explanations for marginalized children's educational outcomes, toward understanding the broader systemic influences on development. It has shaped Early Development Indexes and informed program planning globally for infants and toddlers by promoting a holistic view of the multiple systems and interactions that impact early development (Elliott & Davies, 2018). Just a basic search on the theory and early childhood education brings up hundreds of results, addressing global and local policy for young children, themes of family involvement, early childhood environments, inclusive practice, communities, collaboration, impact of Covid19 and so on. Since its introduction in 1979, Bronfenbrenner's ecological systems model has been widely used in early childhood education, offering an innovative child-centred approach and a focus on real life environments. However, despite its use of the term "ecological," the model primarily addresses human-centered social systems and interactions, overlooking children's interdependence with nonhuman and material elements (Elliott & Davis, 2018; Logan & Widdop Quinton,

<sup>1</sup> Tampere University, Faculty of Education and Culture, Tampere, Finland, e-mail: [Zsuzsa.Millei@tuni.fi](mailto:Zsuzsa.Millei@tuni.fi), ORCID: <https://orcid.org/0000-0003-4681-6024>

<sup>2</sup> University of Warwick, Education Studies, Coventry, United Kingdom, e-mail: [n.m.lee@warwick.ac.uk](mailto:n.m.lee@warwick.ac.uk), ORCID: <https://orcid.org/0000-0002-6040-9030>

<sup>3</sup> Roskilde University, Department of Social Sciences and Business, Roskilde, Denmark, e-mail: [sararas@ruc.dk](mailto:sararas@ruc.dk), ORCID: <https://orcid.org/0000-0002-6830-4815>

<sup>4</sup> Roskilde University, Department of Social Sciences and Business, Roskilde, Denmark, e-mail: [astab@ruc.dk](mailto:astab@ruc.dk), ORCID: <https://orcid.org/0000-0002-4706-8470>

<sup>5</sup> University of Helsinki, Ecosystems and Environment Research Programme, Helsinki, Finland, e-mail: [mira.m.gronroos@helsinki.fi](mailto:mira.m.gronroos@helsinki.fi), ORCID: <https://orcid.org/0000-0002-8210-8837>

<sup>6</sup> University of Helsinki, Department of Education and Practical Theology, Helsinki, Finland, e-mail: [riikka.hohti@helsinki.fi](mailto:riikka.hohti@helsinki.fi), ORCID: <https://orcid.org/0000-0001-6731-589X>

<sup>7</sup> Tampere University, Faculty of Education and Culture, Tampere, Finland, e-mail: [sami.keto@gmail.com](mailto:sami.keto@gmail.com), ORCID: <https://orcid.org/0000-0002-6055-190X>

<sup>8</sup> Natural Resource Institute Finland, Helsinki, Finland, e-mail: [marja.roslund@luke.fi](mailto:marja.roslund@luke.fi), ORCID: <https://orcid.org/0000-0002-3153-7375>

<sup>9</sup> European University Cyprus, Social and Education Sciences, Nicosia, Cyprus, e-mail: [S.Spyrou@euc.ac.cy](mailto:S.Spyrou@euc.ac.cy), ORCID: <https://orcid.org/0000-0003-0493-1403>

<sup>10</sup> University of Oulu, Faculty of Education and Psychology, Oulu, Finland, e-mail: [tuure.tammi@oulu.fi](mailto:tuure.tammi@oulu.fi), ORCID: <https://orcid.org/0000-0002-7582-8887>

<sup>11</sup> Roskilde University, Department of Social Science and Business, Roskilde, Denmark, e-mail: [hannew@ruc.dk](mailto:hannew@ruc.dk), ORCID: <https://orcid.org/0000-0003-2212-8876>

<sup>12</sup> Tampere University, Faculty of Education and Culture, Tampere, Finland, e-mail: [juliene.madureiraferreira@tuni.fi](mailto:juliene.madureiraferreira@tuni.fi), ORCID: <https://orcid.org/0000-0002-8977-5982>

2018). There have been previous moves to include an ecological dimension into development models, such as Stanger (2011), who advocated for integrating true ecological thinking into developmental theory—emphasizing the complex interrelationships that sustain living systems. Moreover, he called for including humans and the physical/natural environment at every system level and introduced a nanosystem to account for ecological processes beyond human perception. In this article, we follow these initiatives and continue to add considerations of ecology to the model.

Bronfenbrenner continuously developed his views on human development and arrived at the new *bioecological model* later in his life to study human development over time with its four defining properties: (1) *Process*, (2) *Person*, (3) *Context*, and (4) *Time*. At the core of this model is the interaction between the individual and the environment (*Process*) which entails *proximal processes* that produce development over time. The effect *proximal processes* have on the developing person depends on how regularly they occur and on the “characteristics of the developing *Person*, of the immediate and more remote environmental *Contexts*, and the *Time* period in which the proximal processes take place (Bronfenbrenner and Morris, 2007, p. 795, original emphasis). Importantly, the characteristics of the *Person* may have biological origins. Bronfenbrenner (1979) addressed the role of organic biological factors and emphasized the dynamic interplay where these biological characteristics interact with and are mediated by the ongoing reciprocal interactions within the individual's immediate environment over time. The biological factors were, however, attributed to human behaviors, attitudes, emotions, motivations, and genetics, which is affected (transformed) in *Processes*, more concretely as epigenetics, and did not include broad ecological dimensions. Epigenetics is where person and environmental interactions of proximal processes are observed in genes and environments that “work together to produce functional organisms” in which signals from the environment activate DNA (Gottlieb, 1998, p. 792). Thus, while the environment is present in two-way interactions between the *Person* and her environment, the environment is only considered as it interacts with genetics. Within *Processes* we can see the dynamic characteristic of development in the mutual constitution of individual and environment – it is not just the individual that is affected by *proximal processes*, but the way the individual actively engages with(in) the environment also affects it. Thus, the richness of this model is in the notion that “form, power, content, and direction of the proximal processes affecting development vary systematically as a joint function of the characteristics of the developing person, the environment—both immediate and more remote—in which the processes are taking place” (Bronfenbrenner and Morris, 2007, p. 798). Yet still, the environment is not conceptualised in ecological terms.

In this article, we expand Bronfenbrenner’s bioecological model (BEM) by integrating ecological and biological processes into *proximal processes*. Specifically, we propose including enduring relationships with non-human beings—such as the microbiome—as constitutive of both the individual and ecology. Drawing on host-microbiome research (e.g., McFall-Ngai, 2017; Margulis & Sagan, 2002), we reconceptualize the person as a multispecies organism in symbiosis with its surroundings. This perspective highlights microbial diversity as central to development and well-being, linking individual lives to broader ecological systems and biodiversity loss (Haahtela et al, 2019). We argue that including microbial interactions as part of *proximal processes*, demand attention to biological and ecological entanglements in child development, everyday childhood practice, research and policy.

Therefore, our first aim is to report on a range of distinct ways of encountering BEM and our expanded formulation of the *Person* - child-as-ecosystem - we coined using host-microbiome research (see Millei et al., 2025). Encounters range from treating host-microbiome data as information that can simply be factored into appropriate aspects of BEM to seeing ecology as encompassing all organisms, inclusive of Persons, living on the planet and thereby casting BEM as in need of a fundamental change. Our second aim is to connect microbiology and ecology with BEM as well as to highlight the interconnected changes undergoing between microbial and planetary processes. Therefore, this paper adopts a theoretical and interdisciplinary methodology, drawing on biological and social disciplines to stage four encounters between the bioecological model and the child-as-ecosystem in intersection with host-microbiome research. We critically engage with existing literature for this work rather than offering an empirical analysis.

In what follows, we will first present the concept of the ‘child-as-ecosystem’ detailing the current research contexts that have informed our development of it and pose some questions regarding the biological in BEM with an intention to add to the model. We ponder on whether the model can be adapted to include the most significant features of the child-as-ecosystem and whether, and in what ways, the figure of the child-as-ecosystem exceeds the terms of the bioecological model. The task of drawing more of the living world into the frames of reference of childhood research is at once promising and disorienting. We argue that it is more urgent than ever due to rapid environmental changes. Our intention is not to settle the questions we raise, but to explore possible responses, and to do so in the hope of engaging others who are also trying to orient themselves toward childhoods and development within our rapidly changing world.

### **The ‘Child-as-Ecosystem’ and Multispecies Ecology**

In early education, psychology, social work and childhood studies biological knowledge is often presented as necessary to better understand child development and wellbeing, children’s agency, socialization, and learning (e.g. Gabriel, 2021; Tatlow-Golden and Montgomery, 2021). The need for a unifying perspective of biological processes and knowledge (Prout, 2005) and their ‘biosocial’ connection with social theories and social relations has been raised earlier by Prout (2005), Lee (2013), and Ryan (2012). Such concerns with ontology may enhance theoretical and methodological developments that foster transdisciplinary study of childhoods (Alanen, 2017; Stryker et al., 2019). In childhood studies, there are also connecting concerns about biodiversity loss, climate change and children’s wellbeing which have been raised first by Garbarino (1993, p. 179), who illuminated our ‘bifocal vision, focused either on immediate child and family issues or on long-range environmental issues’. However, despite the calls for a biosocial perspective and unified vision in childhood studies and early childhood education that also brings concerns about the planetary health and childhood, it seems we have mostly kept issues of child development distanced from issues of biodiversity and climate crises. *Can host-microbiome research with its emphasis on biology and multi-scale relations between organisms and planetary processes offer a unified vision? How could this different focus on the biological together with the environmental be incorporated within Bronfenbrenner’s bioecological model, if at all?* We seek to answer these questions in three subsections, in subsection A, we consider microbes as part of human ecologies and thus directly implicated in *proximal processes* and developing Persons; in subsection B, we expand our vision to ecology; and in subsection C, we consider what an attention to microbes means regarding the bioecological model’s defining properties.

#### **Sub-section A: Child-as-Ecosystem**

According to host-microbiome research, the human as an organism has a biological / microbial constitution. This organism consists of human cells and a vast number of microbial organisms, such as bacteria, fungi or protozoa that outnumber human cells. Thus, the human can be considered as an ecosystem and is located within nested ecosystems (Margulis and Sagan, 2002, p. 86). The notion of an ecosystem moves us directly into the biological complexities and relationalities of different organisms. The human-as-ecosystem is not a homogenous unity of one species. It is a biosocial being, a member of a collective (Costello et al., 2012). It is mutually entangled in a human-microbial ecosystem where the diversity of this ecosystem is the key to health, im/balance, competition and change, reflective also of the large-scale need for the diversity of living and life processes on the planet. The view of the human body as an ecosystem necessitates an understanding of how a developing child co-exists and co-evolves with microbes internal and external to all bodies in multiple, interdependent ways so that “the loss of a single species probably entails the loss of many kinds, not just one” (McFall-Ngai, 2017, p. 66).

With the concept of the child-as-ecosystem, we see possibilities for creatively rethinking the child in ways that disrupt human-centered and exceptionalist understandings acknowledging the radical interdependence of all life in which human bodies, microbes and genetics are amongst the constitutive elements. It also moves a further step in reconceptualizing ontology by seeing the child not as an external addition to the world but as already part of unfolding bioecologies. More importantly, the child’s body is

itself a multiplicity which springs from the largely symbiotic relationalities in place within the multiple ecosystems and opens our thinking to different kinds of relation making, research and practices.

Research shows that the host-microbiome-ecology connection is not inconsequential, but a fundamental prerequisite for what we may call human life and development (e.g., Blaser, 2016; McFall-Ngai, 2017). With the recognition of these relations, we can elaborate on the idea of how the microbial life add to what is considered in proximal processes in BEM and with what consequences for conceptualizing development. Particularly, in calling attention to new relations, we must pay attention to the Person as a multitude in synergistic (symbiotic) relations within nested ecologies.

Recognizing microbial life also emphasizes how numerous mutually defining social and biological processes can lead researchers to ask different questions and bring into view relations perhaps less seen or explored before (see more in Lee, 2013). We are also inspired by what such a recognition may mean for development and a child's emerging relations with the world—their living conditions, relation-making practices and the ethics and politics which such understandings and practices may ignite. We consider the potential for reimagining the Person / child within this more expansive and relational frame promising, though we do realize that this is also a frame which has yet to gain traction in academic circles, in policy and certainly in public discourse.

### **Sub-section B: Bioecology**

To enable the addition of life processes to BEM, we present an account of ecology, a concept and a research field which studies the interactions among individuals, species and the environment. At a very fundamental level, ecology is the composition and diversity of species that are based on four processes: dispersal, selection, diversification and drift (Nemergut et al., 2013; Vellend, 2010). First, organisms arrive via dispersal, migrating from the regional species pool in the surrounding environment, which differs across locations. For example, in rural areas microbial diversity is generally higher compared to urban areas (Parajuli et al., 2018) which is likely to affect dispersal of environmental microbes in homes (Grönroos et al., 2024). Also, human and non-human animal contacts contribute to the regional species pool of microbes by introducing their own individual microbial species into the potential collection of dispersers (Song et al., 2013).

Second, the process of selection occurs when species' features vary, thus resulting in species varying in fitness under different circumstances, for example, under different levels of resource availability or presence of other species. One realization of resource availability is the effect of host diet on gut microbial composition (Wilson et al., 2020). For instance, different types of fibers are broken down by different bacterial species, and thus the fiber content of the diet selects certain types of bacterial species (Cronin et al., 2021). An example of species' interactions is colonization resistance. Microbial species can inhibit the growth of other species through interference competition (e.g. producing inhibitory compounds) or exploitative competition (e.g. consuming nutrient resources) (Caballero-Flores et al., 2023). These are some of the mechanisms through which diverse microbial communities decrease the risk that pathogenic microbial species gain dominance and cause diseases.

Third, in addition to dispersal, new species and forms appear also via diversification. In asexually reproducing organisms, such as bacteria, even one favorable mutation may lead to the development of a new strain with novel functions (Nemergut et al., 2013). One example of diversification is the appearance of antibiotic-resistant bacteria which are a severe problem affecting children especially in low-income countries (Larsson and Flach, 2022).

The fourth process is called drift (Vellend, 2010). Even if conditions favor a certain species, there is some possibility that this species will drift to extinction. Small population size increases the importance of drift. A typical characteristic of human microbial communities is the high number of microbial species that are present in low abundances thus being vulnerable to random extinctions (Fodelianakis et al., 2021).

These four processes act simultaneously, but their relative strength varies under different scenarios. For example, children born via caesarean section, are mainly colonized by the mother's skin microbes

instead of vaginal microbes (Sprockett et al., 2018), and an imprint of this different community composition can be seen even two years after birth (Bokulich et al., 2016). One potential reason for this difference is the priority effect which means that history affects the other processes: dispersal, selection, diversification and drift (Sprockett et al., 2018). When priority effects occur, the order of arrival (dispersal) affects the resulting community composition, including selection, diversification and drift.

Adding understandings of bioecology as related to host-microbial relations to BEM broadens the four properties —Person-Process-Context-Time— and the synergistic relationships between Persons and Contexts. The Person is then composed of dynamic and constantly evolving bioecological (microbial) relations constituted by external biosocial relations and internal ones and their synergistic relations within nested ecosystems. These biological and ecological relations are often obscured by assumptions that the child is a unified human subject and that human biological processes are universal (Lee, 2013). The integration of microbial relations which we demonstrated here into BEM, which already assumes varied biological processes, can open BEM for reconsidering child development and the child's relations with ecologies as emerging in synergistic relations between bio-ecological and social, societal and historical processes. Our proposal enlarges the model as it adds one specific connecting system that is simultaneously in Person and Context, bringing focus to the systemic complexity involving the biological in BEM's model.

### **Sub-section C: Synergistic Relations**

When considering an organism and its development from a multispecies framework, mutually affecting relations with other organisms as well as natural, cultural, economic, political and technological forces are considered important. The Person's context becomes

the multitudes of lively agents that bring one another into being through entangled relations [...] These larger contexts are [...] complex "ecologies of selves," dynamic milieus that are continually shaped and reshaped, actively—even if not always knowingly—crafted through the sharing of "meanings, interests and affects," as well as flesh, minerals, fluids, genetic materials, and much more." (van Dooren et al., 2016, pp. 3-4)

Taking the more-than-human seriously – assemblies of other animals, plants, fungi, microbes, but also chemicals (e.g., acids) and inorganic matter (e.g., salt, rocks, metals) – calls for a notion of development that is necessarily 'developing with' whereby one becomes different through others becoming different. Multispecies studies often call for tracing heterogeneous assemblages to consider what is at stake for those involved. Whose births, bonds and growing up matter and how, for instance (Tammi et al., 2023)? What are 'we' to a myriad of others? Bronfenbrenner certainly presents proximal processes as synergistic interactions, but as interactions between somewhat isolated objects, and the focus of investigation remains on the human. This is a point of difference with multispecies vision as coined by van Dooren and colleagues (2016). The notion of 'developing with' refers to 'intra-action' where synergistic relations change the so called 'objects' as well and this needs far more attention than usually given. Gottlieb's work (1998) which has been incorporated to BEM also highlights environmental influences in the ways DNA information structures proteins and organisms, and thereby identifies a mechanism through which environmental changes in the form of, for example, temperature, light-dark cycle, or presence of food are registered in development as differences in the Person from the molecular scale up to behavior that can go on to affect the environment over time. BEM's Time property considers time as "continuity versus discontinuity in ongoing episodes of proximal process" and "periodicity of these episodes across broader time intervals, such as days and weeks" as well as "changing expectations and events in the larger society, both within and across generations, as they affect and are affected by, processes and outcomes of human development over the life course" (Bronfenbrenner and Morris, 2007, p. 796). A notion of linear time is at the heart of these considerations that sits uncomfortably with even Gottlieb's (1998) description of environmental changes that refer to circularities. Led by these brief considerations, multispecies childhood studies could help in re-signifying Bronfenbrenner's anthropocentric and interactional model in the era of biodiversity loss. Its ontology pushes against human exceptionalism by highlighting a specific type of synergistic relation with changing environments: intra-action with/in the bioecological environment which humans are entangled with and nested and synergistically interdependent on its broader life processes. An alternate possibility is to take the human Person momentarily out of focus and give attention to a world of beings

‘made in entangling relations with significant others’, as Anna Tsing (2013) defines ‘social’, where the social includes also more-than-human socialities, such as animal, plant or microbial community collectivities or bioecologies. Then, would we, through blurring the human, actually gain a sharper view of what it means to be and develop as a human?

Either way, to recognize more life processes and their multi-scale synergistic relations within the planetary context, the understandings of human and other organisms must take place as multispecies worlds, to include ecologically embedded views. This would offer a way to understand proximal processes as dependent on, entangled with and reliant on ecologies which are increasingly threatened today and the development of which needs parallel attention to that of human development. In the following section, we illustrate and reflect on the points we made above as we present four encounters with the BEM in relation to our disciplinary fields.

### **Research Based Encounters with BEM**

Each of the following encounters draws on existing research relating BEM and ‘child-as-ecology’ in a distinctive way. Each encounter introduces a different field of expertise - Encounter 1, social stratification; Encounter 2, child and family social work; Encounter 3, educational phenomenology; and Encounter 4, environmental ecology and health. To conclude each encounter, we reflect on BEM and the life processes that the encounter draws attention to.

#### *Encounter 1: Ecology of Living Space and Proximal Processes*

In BEM, proximal processes are synergistic relationships between the Person and Context (Bronfenbrenner & Morris, 1998, p. 996), which could take place, for example, in shared parent-child or child-child activities, group play and individual play (Bronfenbrenner and Ceci, 1994). Shared parent-child activities are socially stratified, with socioeconomically advantaged families spending more time in developmentally tailored play and teaching than less advantaged families (e.g. Kalil et al., 2012) making these proximal processes a key mechanism of social reproduction. Likewise, the physical surroundings and ecologies of proximal processes are also shaped by the child’s socioeconomic status. Hence, the relationship between the child’s ecological environment and socioeconomic status is one of the new connections between the biological and the social that we wish to highlight here. In picturing a child and a parent playing or reading together, what might the surroundings look like? Proximal processes might take place in a multitude of sites including human-built environments and green spaces where in both the notion of the child-as-ecosystem directs attention to the ecological environment and the microbial life in that environment. Specifically, it raises attention to how the microbial life of the ecological environment affects proximal processes.

The relationship between the brain and the gut is important to consider in the above social relationships which are partly governed by the gut-brain-axis. In a reciprocal relationship, the brain affects intestinal activities and the gut affects mood, cognition, and mental health (e.g., Appleton, 2018). Socioeconomic status influences accessibility to physical spaces which are characterized by different microbial diversity. While studies show that exposure to microbially diverse materials and surroundings positively affects the human microbiome, immune system, and not least children’s well-being, access to these places is unevenly distributed (Puhakka et al., 2019; Roslund, Parajuli et al., 2022; Roslund, Rantala et al., 2019). Economic inequality, and fiscal and social policy conditions affect parents’ socioeconomic status and consequently children’s lives by either compensating or reinforcing inequalities. The housing market sets the limits for the effect of socioeconomic status on what dwelling it is possible for parents to attain. Can parents afford a home with a garden? Or perhaps a city apartment with a lush green courtyard? Or a second home in the countryside? Moreover, local planning affects what green spaces are available in affluent and less affluent neighborhoods. Local job markets and infrastructure affect the possibilities of commuting, making rural and urban neighborhoods attractive. In many cities socioeconomically advantaged families tend to live in greener neighborhoods (e.g., Csomós et al., 2024; de Vries et al., 2020;

Buijs, & Snep 2020), and children of higher socioeconomic status are more likely to have a green home-school walk (Khanian et al., 2024).

The ecological diversity around the home may affect whether parents and children spend regularly extended time outside and what microbiota they will be exposed to. The frequency and period of exposure and differential diversity of microbial exposure may shape the proximal process via the gut-brain-axis. Research has yet to test these mechanisms, however, while not measuring green space, a recent cross-national study finds that access to ecologically rich outdoors space suitable for play increases children's wellbeing (Rubio-Cabañez, 2024). To sum up, socioeconomic status modulates access to green space and thereby potential exposure to natural microbiota affecting proximal processes hence potentially affecting child development due to socioeconomic differences. The link between the social and the biological raised here posits development as changing within synergistic relations.

### *Encounter 2: Parental Separation and Biosocial Entanglements*

In research as well as in work with children experiencing parental separation, a key focus is to ensure the best interests of the child following the separation. A common conception is that the best interest of the child is closely linked to the child's relation with the parents as well as to the relationship between the parents. Children's views are often interpreted as an expression of the quality of these relationships. For this reason, the child-parent relationship and the parent-parent relationship are often foregrounded, omitting other relations, aspects, and spaces in the child's life (Warming & Alminde, 2025).

Children with separated parents often move, adjusting to everyday practices connected to, for instance, different homes that have different practices that create local microbial environments in those homes. These practices alter the composition and diversity of microbes related to the four ecological processes outlined above: dispersal, selection, diversification and drift. These practices include, inter alia, sanitation practices, presence of pets and plants, regularity of non-family members' visits, and routines of visiting microbially rich places, such as forests that can alter microbial diversity in the home. Change in environments means participating in different microbial communities, as different families, persons and places and their practices constitute specific microbial environments (see above). Because the child is composed of dynamic and constantly evolving ecological relations both within her body and externally, considering local microbial environments of homes and acknowledging children's microbiological constitution can lead to new ways of studying and understanding children's everyday lives, development and the proximal processes that synergistically shape them. Recent studies have suggested that the diversity of the microbial life in human surroundings can have an impact on children's physical wellbeing (e.g., Roslund et al., 2022). Children's wellbeing in different spaces/homes thus is connected to microbial diversity. Because humans are the primary bacterial vector in homes, mixing humans in new homes produces new bacterial communities in the new home (Lax et al., 2014). Subsequently, children's preferences following parental separation and what they perceive as pleasant spaces, which is often seen as connected to only human relations, might also need to be explored in connection to microbial environments manifesting in smells, tastes, plants and pets indicating ecological and microbial diversities (Mackerron & Mourato, 2013; Nisbet et al., 2009).

The microbial lens also expands what needs to be considered in children's views on separation, including the complex ecologies of parental separation. Considering children's sense of wellbeing based on microbial environments and their effect on proximal processes related to parental separation provides a fuller approximation and expands the relational considerations. In BEM, this kind of biosocial focus brings more attention to the importance of social practices as they shape microbial environments in interaction with the child-as-ecosystem. It is not only the child and her or his social relations, but a complexity of people's internal and external ecologies, ecologies of places and practices that could be also considered when studying and assessing children's experiences of parental separation. Besides, it is also important to understand how politics structuring this area promotes or limits microbial diversity of places, such as policies that promote equal parenting and children following the parents.

### ***Encounter 3: Socialization in the More-than-Human World***

BEM can be viewed as a theory of socialization due to its focus on child development within specific environmental contexts during which skills and abilities emerge from interaction between dispositions and the environment. In the bioecological model of Process-Person-Context-Time, Bronfenbrenner characterized the specific dynamics of socialization as synergistic proximal processes where each child has unique characteristics (Person) and unique socialization environments (Context) that together create unique proximal processes, which drive over time the socialization of the child. Prosocial behavior, as a part of socialization, is mediated both by the interpersonal relationships and certain dispositions of the child, such as empathy (Carrizales et al., 2023). The development of empathy is associated with warm and supportive caretaking relationships, and equal and trustworthy peer relationships (Boele et al., 2019).

For humans and other empathic animals, empathy can be considered a repertoire of proximate processes for moral and prosocial behavior (Preston & de Waal, 2002). Although empathy has traditionally been studied in the context of human intra-species relationships, growing attention is being directed toward inter-species empathy (e.g., Schnegg & Breyer, 2022) driven by findings that empathy is a predictor of pro-ecological attitudes and behavior in humans (e.g., Berenguer, 2007). Empathy provides knowledge of others through encountering them, while maintaining self-other distinction (Zahavi and Michael, 2018, p. 600). The ‘other’ refers to any entity that shares overlapping sensory (or other interaction) modalities, facilitating the transmission of social signals or affects across species or kingdom boundaries. This ‘other’ therefore is different to the Person or objects that Bronfenbrenner identifies as important in the Context (Bronfenbrenner & Morris, 2007). For instance, chemical signaling is employed in the communication between a human host and their associated microorganisms (Hughes & Sperandio, 2008). However, in the absence of social signals, empathic concern can also be elicited by imagination or acquired abstract knowledge of the other (Singer & Lamm, 2009) that Bronfenbrenner identified as signs. An example of human-microbes empathy is when a child alters their eating habits out of concern for the microbes residing in their gut. This empathic concern may have arisen either directly through signals received from microbes (stomach pain etc.), or through the child’s imagination or acquired abstract knowledge of microbial wellbeing.

This multispecies perspective added to BEM alters our understanding of proximal processes, emphasizing the role of the body’s multiple sensibilities, beyond experiences that come according to BEM with feelings and personal beliefs, in child participation within multispecies communities. The multispecies relations of the child lead to different kinds of proximal processes and hence socialization and recognizing those social capabilities that emerge beyond purely human communities (see more on eco-socialization theory as outlined by Keto and Forster (2021)). A multispecies understanding of the socialization process sheds light on those developmental and behavioral changes within the child that occur during reciprocal interactions with other organisms. Interaction with microbes begins in the womb (Aagaard et al., 2014) and continues throughout human development to the end of life, for us here, significantly influencing the child’s development, physiology, psychology, cognition and behavior (Sarkar et al., 2018). A deeper understanding of these relationships, including the information exchanged within them, could also enable the child to act in a moral or prosocial manner, so to speak, toward their microbial partners.

### ***Encounter 4: Microbial Life in Development, Health and Well-being***

Environmental health research brings vital evidence for the need for mutual relations with multispecies communities in children’s health, development and wellbeing. Today, most children in the world live in urban areas with possibilities for limited engagements with natural areas (United Nations Department of Economic and Social Affairs Population Division, 2019). Coincidentally, an increasing number of children living in urban areas are also suffering from immune-mediated diseases, including asthma (Ege et al., 2012), type 1 diabetes (Kondrashova et al., 2005), atopy, and allergies (Hanski et al., 2012). According to the biodiversity hypothesis, the main reason for the increasing burden of immune-mediated diseases among urban children is the lack of contact with biodiverse ecologies and its microbes (Haahtela, 2019; Rook et al., 2003). Proximal processes can be considered as the priming of the developing immune system

in which commensal and pathogenic microbes and viruses of forests or lakes and oceans participate. A resilient immune system has the capacity to adapt to challenges, such as infection, diseases and more recently COVID-19, by developing and regulating an appropriate immune response (Haahtela et al., 2021).

There are several other proximal processes that we can give as examples. A child with few contacts with ecological microbiota more likely develops food allergies which may further affect her/his attitude towards food (Yu et al., 2024). The COVID-19 pandemic can be seen as a historical event which affected microbial compositions of bodies (perhaps even intergenerationally) and microbial relations in multiple ways, such as through extreme sanitization, limiting human contact and lack of exposure to microbes in natural spaces. Those children, who were born or were within their first three years of age are the most affected, since they might lack microbes (due to missing exposure and sanitized environments) that modulate developmental processes (Friedl et al., 2024)

Ecological relations thus are important for the development and maintenance of commensal microbiota, inhabiting the skin, gut and other mucosal surfaces, regulating children's metabolism, inflammation, neurodevelopment, mental health through gut-brain axis, and preventing pathogen growth and diseases (Rieder et al., 2017). Biodiversity intervention studies in Finland have demonstrated that modifying children's playground with microbiologically diverse surfaces enhances the immune regulation and health-associated commensal microbiota of urban children (e.g. Roslund et al., 2022). Daycare yards and other playgrounds enriched with diverse microbes may be a feasible approach for increasing well-being (Puhakka et al., 2019) and decreasing the prevalence of immune-mediated diseases among children. Biodiverse ecologies affect development and cognitive skills by shaping proximal processes between broader ecologies and microbes that are part of the Person (child-as-ecosystem) (Dadvand et al., 2015). These aspects and synergistic interactions between microbial communities and child-as-ecosystem affect the development of the child through proximal processes, however, they are not yet considered in BEM. Life processes are dependent on these mutual interactions thus require attention. Enhancing contact with diverse microbiota in local ecologies could be incorporated at any system level of BEM. For example, administrative authorities can promote changes in curricula or support building greener daycare yards. At the microsystem level, parents can incorporate the microbial world in everyday life through various practices, such as, exposing children more to green environments or composting and fermentation at home.

### Conclusion

The four encounters staged above, first, open the child's ontological status to a new, more expanded and expansive multiplicity, that of the child-as-ecosystem. The understanding of the child-as-ecosystem foregrounds life processes at work which allow for a more complex consideration of proximal processes as well as *Person* and *Context*. In this way, the model can highlight how the ecological environment plays a part in the constitution of child bodies, development and orients attention to the importance in early childhood education to everyday practices that are microbial in nature, such as cleaning, feeding, educational and living places, nature visits and so on. Second, we demonstrated the importance of microbial environments and locally constituted child-as-ecosystems that are in flux. This gives further arguments for considering the biologies of *Person* and *Context*. His points to the importance of the provision of biodiverse and clean environment for optimal child development. Third, we argued that multispecies life processes need to be accounted for in BEM and gave examples of possible ways to do so. Microbial co-existence helps to resist ideas of linear development by highlighting the continuous reconstitution of all bodies, young and old, through the interdependencies between microbes and the physiological processes within human bodies and the nested ecologies in which bodies are situated. This insight calls for a reconsideration of notions of childhood in early childhood education, highlighting the importance to understand child bodies as highly permeable for environmental influences and interdependent with environmental processes.

BEM carefully analyses the social field and focuses on synergistic proximal processes that drive development; however, with the advancements in contemporary host-microbiome science, we have argued, BEM would be enhanced with considering biological processes that constitute children's

development and wellbeing. Through the encounters above, we have described ways in which biological processes that are different from disposition, resources and experience defined in BEM have been shown to play a part in children's development and wellbeing. In doing so, we have identified reasons to think that BEM can become more 'bioecological' than it presently is and hence can grow in its ability to model children's lives and thus may, in time, expand its range of policy and practice applications. In our hope, this would be to consider in policy anthropogenic changes to the environment which reconstitute children's bodies by altering their physiology, for example, microplastics in daycare air or agricultural pesticides, antibiotics and growth hormones in children's food. Policy regarding early childhood thus must consider pollution, biodiversity loss and nature exposure, hygiene and cleaning practices, and processed food, all altering children's microbiome and for creating microbially rich environments for children.

We have also noted that that the developing *Person* must be considered as an ecosystem living within nested ecologies, which are broader ecologies of multispecies relations (more-than human world). In other words, any *Person* needs to be seen as an open-ended multispecies community nested in and shaped by bioecologies, where ecologies beyond humans also include biodiverse ecologies. The development and wellbeing of any given *Person* is best understood as intra-actions across multispecies communities which are affected by wide-ranging ecological conditions. The present-day context of biodiversity loss requires us to see ourselves also in terms of and part of ecosystems. Thus, inequalities in human and more-than-human flourishing need to be understood in terms of bioecological interdependencies and synergies. This change might require the rethinking of the foundations of Bronfenbrenners' bioecological model.

Throughout his career, Bronfenbrenner worked to expand and fine tune BEM by informing it with experimental research or new research on development, such as human genetic expression (Rosa & Tudge, 2013). We have followed this path to review what opportunities and challenges can emerge when BEM is placed in dialogue with host-microbiome research. BEM made significant contributions to policy and practice over the years, and we are committed to continuing this work as part of a wider interdisciplinary project that seeks to make sense of childhoods and child development in the light of developing knowledge of microbial life and biodiversity loss (Microbial Childhood Collaboratory).

## Declarations

### *Authors' Declarations*

**Acknowledgements:** We would like to acknowledge and thank the reviewers' helpful comments.

**Authors' contributions:** The main authorship goes to Zsuzsa Millei, others have been working on sections of the article and developed ideas as a team.

**Competing interests:** The authors declare that they have no competing interests.

**Funding:** Microbial Childhood Collaboratory (MCC): Enlivening Critical Childhood Studies (345269 NOS-HS) Exploratory workshop (Nordforsk 2022-2023).

**Ethics approval and consent to participate:** No need for ethics approval as this is a theoretical review article.

### *Publisher's Declarations*

**Editorial Acknowledgement:** The editorial process of this article was completed under the editorship of Dr. Mehmet Toran through a double-blind peer review with external reviewers.

**Publisher's Note:** Journal of Childhood, Education & Society remains neutral with regard to jurisdictional claims in published maps and institutional affiliation.

## References

- Aagaard, K., Ma, J., Antony, K. M., Ganu, R., Petrosino, J., & Versalovic, J. (2014). The placenta harbors a unique microbiome. *Science Translational Medicine*, 6(237), 237ra65. <https://doi.org/10.1126/scitranslmed.3008599>
- Alanen, L. (2017). Childhood studies and the challenge of ontology. *Childhood*, 24(2), 147–150. <https://doi.org/10.1177/0907568217704539>
- Appleton, J. (2018). The gut-brain axis: influence of microbiota on mood and mental health. *Integrative Medicine: A Clinician's Journal*, 17(4), 28–32.
- Berenguer, J. (2007). The effect of empathy in proenvironmental attitudes and behaviors. *Environment and Behavior*, 39(2), 269–283.

<https://doi.org/10.1177/00139165062929>

- Blaser, M. J. (2016). Antibiotics, birth mode, and diet shape microbiome maturation during early life. *Science Translational Medicine*, 8(343), 343ra82. <https://doi.org/10.1126/scitranslmed.aad7121>
- Boele, S., Van der Graaff, J., De Wied, M., Van der Valk, I. E., Crocetti, E., & Branje, S. (2019). Linking parent–child and peer relationship quality to empathy in adolescence: a multilevel meta-analysis. *Journal of Youth and Adolescence*, 48(6), 1033–1055. <https://doi.org/10.1007/s10964-019-00993-5>
- Bokulich, N. A., Chung, J., Battaglia, T., Henderson, N., Jay, M., Li, H., Lieber, A. D., Wu, F., Perez-Perez, G. I., Chen, Y., Schweizer, W., Zheng, X., Contreras, M., Dominguez-Bello, M. G., & Blaser, M. J. (2016). Antibiotics, birth mode, and diet shape microbiome maturation during early life. *Science Translational Medicine*, 8(343), 343ra82–343ra82. <https://doi.org/aad7121>
- Bronfenbrenner, U. (1979). *The ecology of human development: experiments by nature and design*. Harvard University Press.
- Bronfenbrenner, U., & Ceci, S. (1994). Nature-nurture reconceptualized in developmental perspective: A bioecological model. *Psychological Review*, 101(4), 568–5865. <https://doi.org/10.1037/0033-295x.101.4.568>
- Bronfenbrenner, U., & Morris, P. A. (1998). The ecology of developmental processes. In W. Damon, & R. M. Lerner (Eds.) *Handbook of child psychology: Theoretical models of human development* (5th ed., pp. 993–1028). John Wiley & Sons, Inc.
- Bronfenbrenner, U., & Morris, P. A. (2007). The bioecological model of human development. In W. Damon & R. M. Lerner (Eds.) *Handbook of child psychology: Vol. 1. Theoretical models of human development* (6th ed., pp. 793–828). John Wiley & Sons. <https://doi.org/10.1002/9780470147658.chpsy0114>
- Caballero-Flores, G., Pickard, J. M., & Núñez, G. (2023). Microbiota-mediated colonization resistance: mechanisms and regulation. *Nature Reviews Microbiology*, 21, 347–360. <https://doi.org/10.1038/s41579-022-00833-7>
- Carrizales, A., Gülseven, Z., & Lannegrand, L. (2023). The mediating role of empathy in the links between relationships with three socialisation agents and adolescents’ prosocial behaviours. *Journal of Social and Personal Relationships*, 40(9), 2855–2877. <https://doi.org/10.1177/02654075221099652>
- Costello, E. K., Stagaman, K., Dethlefsen, L., Bohannan, B. J. M., & Relman, D. A. (2012). The application of ecological theory towards an understanding of the human microbiome. *Science*, 336(6086), 1255–1262. <https://doi.org/10.3389/fnut.2025.1550292>
- Cronin, P., Joyce, S. A., O’Toole, P. W., & O’Connor, E. M. (2021). Dietary fibre modulates the gut microbiota. *Nutrients*, 13(5), 1655. <https://doi.org/10.3390/nu13051655>
- Csomós, G., Farkas, J. Z., & Kovács, Z. (2024). A GIS-based assessment of different income groups’ access to multiple types of green areas in Budapest, Hungary. *Habitat International*, 146, 103054. <https://doi.org/10.1016/j.habitatint.2024.103054>
- Dadvand, P., Nieuwenhuijsen, M. J., Esnaola, M., Forn, J., Basagaña, X., Alvarez-Pedrerol, M., Rivas, I., López-Vicente, M., De Castro Pascual, M., Su, J., Jerrett, M., Querol, X., & Sunyer, J. (2015). Green spaces and cognitive development in primary schoolchildren. *Proceedings of the National Academy of Sciences*, 112(26), 7937–7942. <https://doi.org/10.1073/pnas.1503402112>
- de Vries, S., Buijs, A. E., & Snep, R. P. H. (2020). Environmental justice in The Netherlands: Presence and quality of greenspace differ by socioeconomic status of neighbourhoods. *Sustainability*, 12(15), 5889. <https://doi.org/10.3390/su12155889>
- Ege, M. J., Mayer, M., Schwaiger, K., Mattes, J., Pershagen, G., van Hage, M., Scheynius, A., Bauer, J., & von Mutius, E. (2012). Environmental bacteria and childhood asthma. *Allergy*, 67(12), 1565–1571. <https://doi.org/10.1111/all.12028>
- Elliott, S., & Davis, J. M. (2018). Challenging taken-for-granted ideas in early childhood education: A critique of Bronfenbrenner’s ecological systems theory in the age of post-humanism. In A. Cutter-Mackenzie-Knowles, K. Malone, & E. Barratt Hacking (Eds.) *Research handbook on childhoodnature: Assemblages of childhood and nature* (pp. 1119–1154). Springer. [https://doi.org/10.1007/978-3-319-67286-1\\_60](https://doi.org/10.1007/978-3-319-67286-1_60)
- Fodelianakis, S., Valenzuela-Cuevas, A., Barozzi, A., & Daffonchio, D. (2021). Direct quantification of ecological drift at the population level in synthetic bacterial communities. *ISME Journal*, 15(1), 55–66. <https://doi.org/10.1038/s41396-020-00754-4>
- Friedl, N., Sporreiter, M., Winkler, C., Heublein, A., Haupt, F., Ziegler, A. G., Bonifacio, E., & Fr1da Study Group (2024). Progression from presymptomatic to clinical type 1 diabetes after COVID-19 infection. *JAMA*, 332(6), 501–502. <https://doi.org/10.1001/jama.2024.11174>
- Gabriel, N. (2021). Beyond ‘developmentalism’: A relational and embodied approach to young children’s development. *Children & Society*, 35(1) 49–61. <https://doi.org/10.1111/chso.12381>
- Garbarino, J. (1993). Childhood: What do we need to know?. *Childhood*, 1(1), 3–10. <https://doi.org/10.1177/090756829300100102>
- Gottlieb, G. (1998). Normally Occurring Environmental and Behavioral Influences on Gene Activity. *Psychological Review*, 105(4), 792–802. <https://doi.org/10.1177/090756829300100102>
- Grönroos, M., Jumpponen, A., Roslund, M. I., Nurminen, N., Oikarinen, S., Parajuli, A., Laitinen, O. H., Cinek, O., Kramna, L., Rajaniemi, J., Hyöty, H., Puhakka, R., & Sinkkonen, A. (2024). Using patterns of shared taxa to infer bacterial dispersal in human living environment in urban and rural areas. *Applied and Environmental Microbiology*, 90(10), e00903-24. <https://doi.org/10.1128/aem.00903-24>

- Haahtela, T. (2019). A biodiversity hypothesis. *Allergy*, 74(8), 1445–1456. <https://doi.org/10.1111/all.13763>
- Haahtela, T., Alenius, H., Lehtimäki, J., Sinkkonen, A., Fyhrquist, N., Hyöty, H., Ruokolainen, L., & Mäkelä, M. J. (2021). Immunological resilience and biodiversity for prevention of allergic diseases and asthma. *Allergy*, 76(12), 3613–3626. <https://doi.org/10.1111/all.14895>
- Hanski, I., Von Hertzen, L., Fyhrquist, N., Koskinen, K., Torppa, K., Laatikainen, T., Karisola, P., Auvinen, P., Paulin, L., Mäkelä, M. J., Vartiainen, E., Kosunen, T. U., Alenius, H., & Haahtela, T. (2012). Environmental biodiversity, human microbiota, and allergy are interrelated. *Proceedings of the National Academy of Sciences*, 109(21), 8334–8339. <https://doi.org/10.1073/pnas.1205624109>
- Hughes, D. T., & Sperandio, V. (2008). Inter-kingdom signalling: communication between bacteria and their hosts. *Nature Reviews Microbiology*, 6(2), 111–120. <https://doi.org/10.1038/nrmicro1836>
- Kalil, A., Ryan, R., & Corey, M. (2012). Diverging destinies: Maternal education and the developmental gradient in time with children. *Demography*, 49(4), 1361–83. <https://doi.org/10.1007/s13524-012-0129-5>
- Keto, S., & Foster, R. (2021) Ecosocialization—an ecological turn in the process of socialization. *International Studies in Sociology of Education*, 30(1-2), 34–52. <https://doi.org/10.1080/09620214.2020.1854826>
- Khanian, M., Łaszkiwicz, E., & Kronenberg, J. (2024). Exposure to greenery during children’s home–school walks: Socio-economic inequalities in alternative routes. *Transportation Research Part D: Transport and Environment*, 130, 104162. <https://doi.org/10.1016/j.trd.2024.104162>
- Kondrashova, A., Reunanen, A., Romanov, A., Karvonen, A., Viskari, H., Vesikari, T., Ilonen, J., Knip, M., & Hyöty, H. (2005). A six-fold gradient in the incidence of type 1 diabetes at the eastern border of Finland. *Annals of Medicine*, 37(1), 67–72. <https://doi.org/10.1080/07853890410018952>
- Larsson, D. G. J., & Flach, C. F. (2022). Antibiotic resistance in the environment. *Nature Reviews Microbiology*, 20, 257–269. <https://doi.org/10.1038/s41579-021-00649-x>
- Lax, S., Smith, D. P., Hampton-Marcell, J., Owens, S. M., Handley, K. M., Scott, N. M., & Gilbert, J. A. (2014). Longitudinal analysis of microbial interaction between humans and the indoor environment. *Science*, 345(6200), 1048–1052.
- Lee, N. (2013). *Childhood and biopolitics: Climate change, life processes, and human futures*. Palgrave Macmillan. <https://doi.org/10.1057/9781137317186>
- Logan, M., & Widdop Quinton, H. (2018). Childhoodnature ecological systems and realities: An outline. In A. Cutter-Mackenzie-Knowles, K. Malone, & E. Barratt Hacking (Eds.) *Research handbook on childhoodnature: Assemblages of childhood* (pp. 981–993). Springer. [https://doi.org/10.1007/978-3-319-67286-1\\_54](https://doi.org/10.1007/978-3-319-67286-1_54)
- MacKerron, G., & Mourato, S. (2013). Happiness is greater in natural environments. *Global Environmental Change*, 23(5), 992–1000. <https://doi.org/10.1016/j.gloenvcha.2013.03.010>
- Margulis, L., & Sagan, D. (2002). *Acquiring genomes: A theory of the origins of species first edition*. Basic Books.
- McFall-Ngai, M. (2017). Noticing microbial worlds: The postmodern synthesis in biology. In A. L. Tsing, N. Bubandt, E. Gan, & H. A. Swanson (Eds.), *Arts of Living on a Damaged Planet: Ghosts and Monsters of the Anthropocene* (pp. 51–70). University of Minnesota Press.
- Millei, Z., Spyrou, S., Rosslund, M., Breinholt, A., Tammi, T., Conklin, B., Lee, N., Alminde, S., & Warming, H. (2025). Child ecologies in a microbial world: A new imperative for childhood studies. *Journal of Childhood Studies*, 50(1), 34–52. <https://journals.uvic.ca/index.php/jcs/article/view/21918>
- Nemergut, D. R., Schmidt, S. K., Fukami, T., O’Neill, S. P., Bilinski, T. M., Stanish, L. F., Knelman, J. E., Darcy, J. L., Lynch, R. C., Wickey, P., & Ferrenberg, S. (2013). Patterns and processes of microbial community assembly. *Microbiology and Molecular Biology Reviews*, 77(3), 342–356. <https://doi.org/10.1128/mmb.00051-12>
- Nisbet, E. K., Zelenski, J. M., & Murphy, S. A. (2009). The nature relatedness scale linking individuals’ connection with nature to environmental concern and behavior. *Environment and Behavior*, 41(5), 715–740. <https://doi.org/10.1177/0013916508318748>
- Preston, S. D., & de Waal, F. B. (2002). Empathy: Its ultimate and proximate bases. *Behavioral and Brain Sciences*, 25(1), 1–20. <https://doi.org/10.1017/s0140525x02000018>
- Prout, A. (2005) *The future of childhood: Towards the interdisciplinary study of children*. Routledge. <https://doi.org/10.4324/9780203323113>
- Puhakka, R., Rantala, O., Roslund, M. I., Rajaniemi, J., Laitinen, O. H., Sinkkonen, A., & the ADELE Research Group. (2019). Greening of daycare yards with biodiverse materials affords well-being, play and environmental relationships. *International Journal of Environmental Research and Public Health*, 16(16), 2948. <https://doi.org/10.3390/ijerph16162948>
- Rieder, R., Wisniewski, P. J., Alderman, B. L., & Campbell, S. C. (2017). Microbes and mental health: A review. *Brain, Behaviour and Immunity*, 66, 9–17. <https://doi.org/10.1016/j.bbi.2017.01.016>
- Rook, G. A. W. (2003). Regulation of the immune system by biodiversity from the natural environment: An ecosystem service essential to health. *Proceedings of the National Academy of Sciences of the United States of America*, 100(suppl 2), 9840–9847. <https://doi.org/10.1073/pnas>

- Rosa, E. M., & Tudge, J. (2013) Urie Bronfenbrenner's Theory of Human Development: Its evolution from ecology to bioecology. *Journal of Family Theory & Review*, 5(4), 243-258. <https://doi.org/10.1111/jftr.12022>
- Roslund, M. I., Rantala, S., Oikarinen, S., Puhakka, R., Hui, N., Parajuli, A., Laitinen, O. H., Hyöty, H., Rantalainen, A.-L. Sinkkonen, A., & the ADELE team. (2019). Endocrine disruption and commensal bacteria alteration associated with gaseous and soil PAH contamination among daycare children. *Environment International*, 130, 104894. <https://doi.org/10.1016/j.envint.2019.06.004>
- Roslund, M., Parajuli, A., Hui, N., Puhakka, R., Grönroos, M., Soininen, L., Nurminen, N., Oikarinen, S., Cinek, O., Kramna, L., Schroderus, A.-M., Laitinen, O., Kinnunen, T., Hyöty, H., & Sinkkonen, A., (2022). A Placebo-controlled double-blinded test of the biodiversity hypothesis of immune-mediated diseases: Environmental microbial diversity elicits changes in cytokines and increase in T regulatory cells in young children. *Ecotoxicology and Environmental Safety*, 242(1), 12 113900. <https://doi.org/10.1016/j.ecoenv.2022.113900>
- Rubio-Cabañez, M. (2024). Stratifying cities: The effect of outdoor recreation areas on children's well-being. *European Sociological Review*, 41(3), 472-486. <https://doi.org/10.1093/esr/jcae028>
- Ryan, K. W. (2012). The new wave of childhood studies: Breaking the grip of bio-social dualism?. *Childhood*, 19(4), 439-452. <https://doi.org/10.1177/0907568211427612>
- Sarkar, A., Harty, S., Lehto, S. M., Moeller, A. H., Dinan, T. G., Dunbar, R. I., & Burnet, P. W. (2018). The microbiome in psychology and cognitive neuroscience. *Trends in Cognitive Sciences*, 22(7), 611-636. <https://doi.org/10.1016/j.tics.2018.04.006>
- Schnegg, M., & Breyer, T. (2022). Empathy beyond the human. The social construction of a multispecies world. *Ethnos*, 89(5), 848-869. <https://doi.org/10.1080/00141844.2022.2153153>
- Singer, T., & Lamm, C. (2009). The social neuroscience of empathy. *Annals of the New York Academy of Sciences*, 1156(1), 81-96. <https://doi.org/10.1111/j.1749-6632.2009.04418.x>
- Song, S. J., Lauber, C., Costello, E. K., Lozupone, C. A., Humphrey, G., Berg-Lyons, D., Caporaso, J. G., Knights, D., Clemente, J. C., Nakielny, S., Gordon, J. I., Fierer, N., & Knight, R. (2013). *Cohabiting family members share microbiota with one another and with their dogs.* *eLife*, 2, e00458. <https://doi.org/10.7554/eLife.00458>
- Sprockett, D., Fukami, T., & Relman, D. A. (2018). Role of priority effects in the early-life assembly of the gut microbiota. *Nature Reviews Gastroenterology & Hepatology*, 15, 197-205. <https://doi.org/10.1038/nrgastro.2017.173>
- Stanger, N. (2011). Moving "eco" back into socio-ecological models: A proposal to reorient ecological literacy into human development models and school systems. *Human Ecology Review*, 18(2), 167-173. <https://www.jstor.org/stable/24707472>
- Stryker, R., Boddy, J., Bragg, S., & Sims-Schouten, W. (2019). The future of childhood studies. *Children & Society*, 33(4), 301-308. <https://doi.org/10.1111/chso.12345>
- Tammi, T., Hohti, R., & Rautio, P. (2023). From child-animal relations to multispecies assemblages and other-than-human childhoods. *Barn*, 41(2-3), 1-17. <https://doi.org/10.23865/barn.v41.5475>
- Tatlow-Golden, M., & Montgomery, H. (2021). Childhood Studies and child psychology: Disciplines in dialogue?. *Children & society* 35(1), 3-17. <https://doi.org/10.1111/chso.12384>
- Tsing, A. (2013). More-than-human sociality: A call for critical description. In K. Hastrup (Ed.), *Anthropology and nature* (pp. 27-42). Routledge. <https://doi.org/10.4324/9780203795361-2>
- United Nations Department of Economic and Social Affairs Population Division (2019). *World Urbanization Prospects 2018: Highlights* (ST/ESA/SER.A/421). <https://population.un.org/wup/assets/WUP2018-Highlights.pdf>
- van Dooren, T., Kirksey, E., & Münster, U. (2016). Multispecies studies: Cultivating arts of attentiveness. *Environmental Humanities* 8(1), 1-23. <https://doi.org/10.1215/22011919-3527695>
- Vellend, M. (2010). Conceptual synthesis in community ecology. *The Quarterly Review of Biology*, 85(2), 183-206. <https://doi.org/10.1086/652373>
- Warming, H., & Alminde, S. (2025). Divorcescapes: family conflict and children's lived spaces. *Child & Family Social Work*. <https://doi.org/10.1111/cfs.70051>
- Wilson, A. S., Koller, K. R., Ramaboli, M. C., Nesengani, L. T., Ocvirk, S., Chen, C., Flanagan, C. A., Sapp, F. R., Merritt, Z. T., Bhatti, F., Thomas, T. K., & O'Keefe, S. J. D. (2020). Diet and the human gut microbiome: An International Review. *Digestive Diseases and Sciences*, 65, 723-740. <https://doi.org/10.1007/s10620-020-06112-w>
- Yu, M., Yu, B., & Chen, D. (2024). The effects of gut microbiota on appetite regulation and the underlying mechanisms. *Gut Microbes*, 16(1), 2414796. <https://doi.org/10.1080/19490976.2024.2414796>
- Zahavi, D., & Michael, J. (2018). Beyond Mirroring: 4E Perspectives on Empathy. In A. Newen, L. de Bruin, & S. Gallagher (Eds.), *The Oxford Handbook of 4e Cognition* (pp. 589-606). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780198735410.013.29>