



Drama during story time supports preschoolers' understanding of story character feeling states

Lauren van Huisstede | Scott C. Marley | Katie A. Bernstein | Melissa Pierce-Rivera | Annette Schmidt | Jenny Millinger | Michael Kelley | Katie Brantley | Jen Gantwerker | AERA Annual Meeting | April 12, 2024



Introduction

- Early narrative listening skills are critical precursors to reading comprehension (Lepola et al., 2016, 2020) and are associated with reading comprehension skills (Griffin et al., 2004; Reese et al., 2010).
- Good comprehenders rely on inferences to comprehend narratives (Bowyer-Crane & Snowling, 2005):
 - Cohesive
 - Knowledge-based
 - Evaluative
- Children who struggle with making evaluative inferences based on characters' emotions, motivations, and goals will have difficulty situating characters' actions in the overall story schema, resulting in poor comprehension (Cain & Oakhill, 1999).

Introduction

- DBI is an approach to teaching and learning that incorporates elements of creative drama into the literacy activities (Kilinc et al., 2023).
- DBI supports inferencing in 3 ways:
 1. ...by grounding written and verbal linguistic symbols with real-world meaning through creative drama (e.g., pantomime; *cohesive inferences*)
 2. ...by asking children to relate dramatic expressions to their own personal experiences and prior knowledge (*knowledge inferences*)
 3. ...by focusing children's attention on and enacting story character's emotions, motivations, and goals (*evaluative inferences*)
- Theoretical framework: embodied cognition (Bharadwaj et al., 2022; Biazak et al., 2010; Dargue & Sweller, 2020; Marley et al., 2010)

Research Questions

1. Does embodiment during story retelling support understanding of story character feelings?
2. Do DBI students use more embodiment during recall and understand story character feelings more compared to control students?
3. Does embodied behavior during story recall and recall of story character feelings differ by age?
4. Does emotion word production/understanding story character feelings differ based on time point (Time 1 vs. 2)?
5. Does the time by intervention status interaction vary as a function of age?

Participants

- 28 preschool teachers in Title I schools
 - 14 intervention
 - 14 control
- 196 preschoolers (43% female)
 - 8 randomly selected from returned parent consent forms
 - 50.71 months (range: 31.74-68.63)
 - 69% Hispanic/Latino, 10% White, 8% Black, 4% Native American, 1% Asian, 9% Biracial
 - 28% bilingual English-Spanish speakers

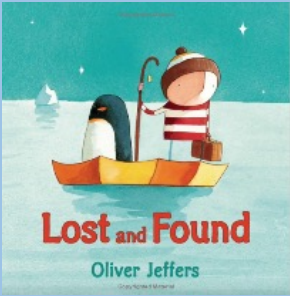
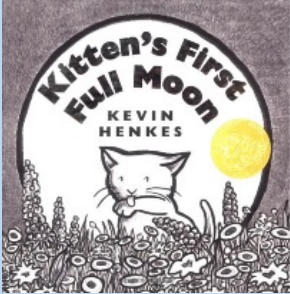
Procedure



PROFESSIONAL DEVELOPMENT BY CHILDSPLAY

- Embedded professional development program for early childhood teachers
- Pairs teachers with professional teaching artists
- 6 units (“I do”/”We do”/”You do”)
- 18 DBI lessons during the school year (9 fall, 9 spring)

Procedure

	Picture Book	Intervention	Control
January		Pantomime: Facilitate children's engagement with imaginary objects or environments; use highly descriptive language to encourage specificity of movement	Business as usual
February		Character development: Facilitate children's taking on a role/character different from themselves	Business as usual

Measures

- Story Recall Measure (SRM)
 - Free recall
 - Prompted recall
- Embodiment Coding System (ECS; Bernstein et al., 2024)
 - Gesture
 - Facial expression
 - Body Movement
 - Vocal Change

RQ1. Does embodiment during story retelling support understanding of story character feelings?

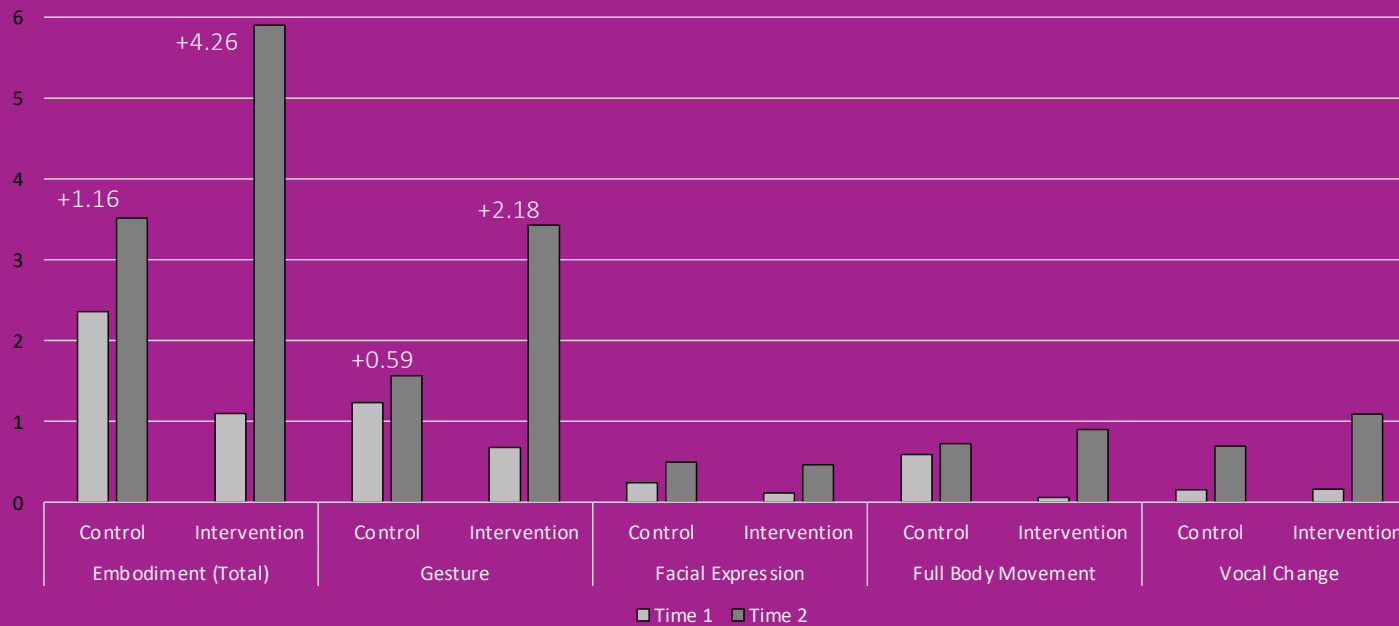
Time 1

- Total number of embodied behaviors + free recall but not prompted recall of story character feelings
- Facial expression and vocal change + free recall of story character feelings
- Vocal change positively correlated with prompted recall.
- Total number of embodied behaviors + free, prompted, and total word production
- Facial expression + free and prompted emotion word production
- Total emotion word production + gesture, facial expression, and vocal change

Time 2

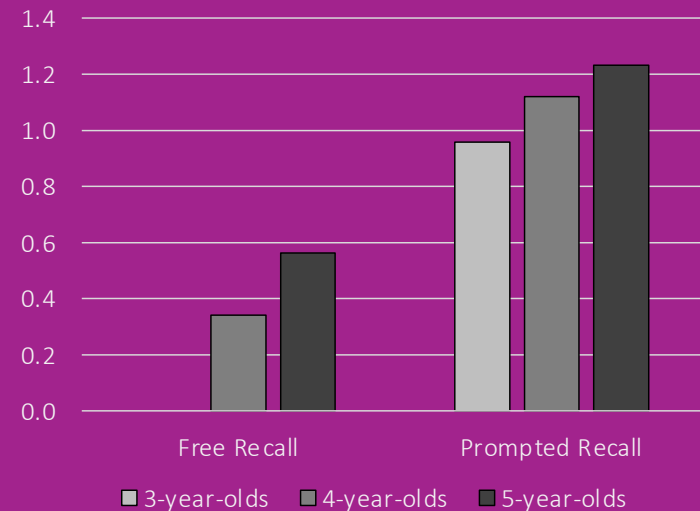
- Only prompted recall of story character feelings + facial expression and vocal change

RQ2. Do DBI students use more embodiment during recall and understand story character feelings more compared to control students?



RQ3. Does embodied behavior during story recall and recall of story character feelings differ by age?

- Significant main effect for free recall, $F(2, 87) = 4.14, p = .02$
 - Follow-up pairwise comparisons revealed **3-year-olds** ($M = 0.00, SE = 0.17$) recalling story character feelings less compared to **4-year-olds** ($M = 0.34, SE = 0.09; t[87] = -1.75, p = .08, d = 0.56$) and **5-year-olds** ($M = 0.56, SE = 0.10; t[87] = -2.80, p = .01, d = 0.94$).
- No significant main effect for prompted recall

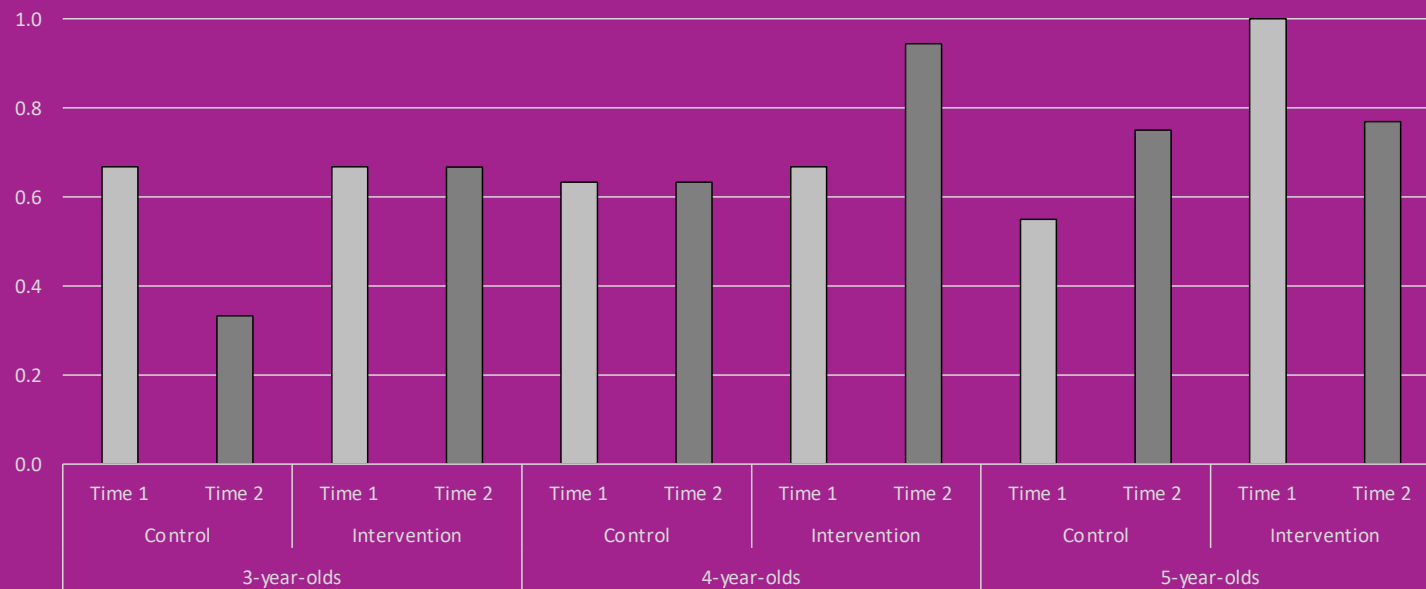


RQ4. Does emotion word production/understanding story character feelings differ based on time point (Time 1 vs. 2)?

- Nope

RQ5. Does the time by intervention status interaction vary as a function of age?

- Significant intervention x time x age interaction

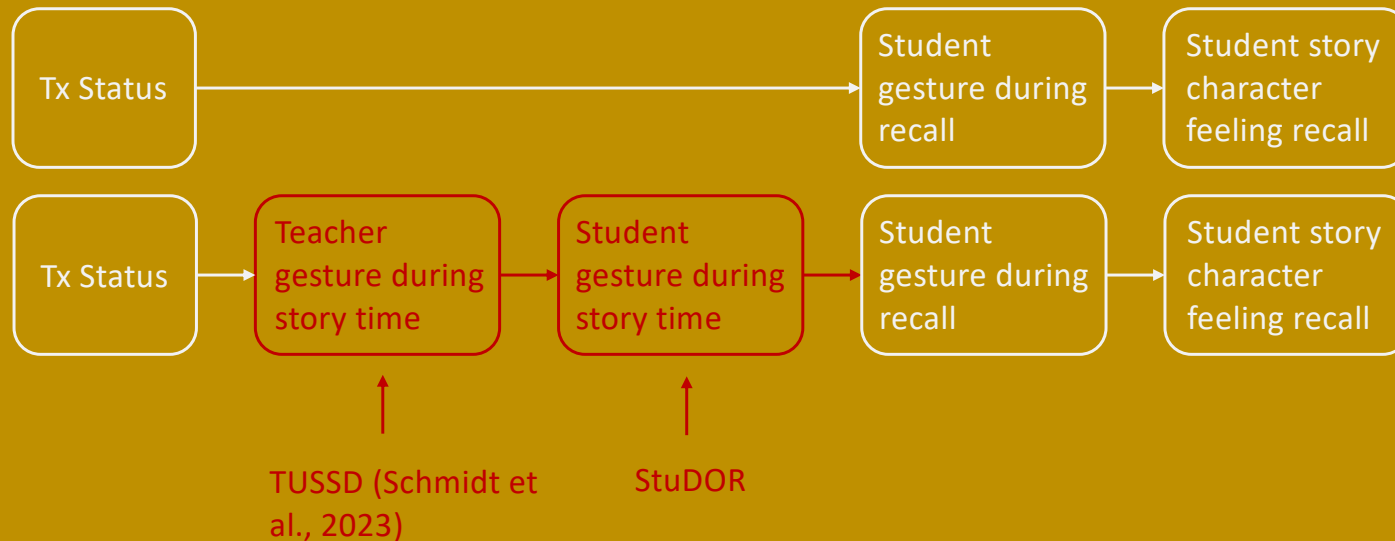


Discussion

- Embodied behavior was associated with story character emotion recall, which is consistent with theories of embodied affectivity (Fuchs & Koch, 2014; Niedenthal, 2007) and facial feedback hypotheses (Coles et al., 2019)
- Intervention students increased gesture use during story retelling
 - Not proximal to emotion
- Surprisingly, no intervention effects were observed for students' free or prompted recall of story character feelings
 - Contrary to other study findings (Bernstein et al., 2024)
 - Possible that factors may explain lack of findings: emotion knowledge (Channell & Barth, 2013)




Future Directions

- Programming side: EYEPlay ADAPT (All Differing Abilities Participate and Thrive)
- Research side:



Original Manuscript

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Lauren van Huisstede ¹, Scott C Marley², Katie A Bernstein ³, Melissa Pierce-Rivera⁴, Annette Schmidt⁵, Jenny Millinger⁶, Michael F Kelley⁷, Maria Adelaida Restrepo ⁸, and Cristal Vargas Cesario⁹

Abstract

Inference generation, an emerging skill in preschool-aged children, is critical for story comprehension and often requires instruction and practice to develop. Drama-based instruction (DBI) is a promising strategy for supporting preschool students' inferencing skills, emotion understanding, and overall story comprehension. The current study examined the effects of a DBI story time intervention on preschool students' recall of story character feeling states. As part of the larger intervention, 196 students (ages 3-5) were randomly assigned by classroom to participate in DBI or traditional story time. After story time, students completed a brief story retelling task (free and prompted recall of the story). Recordings of students' story retellings were coded for embodied behavior (i.e., gesture, facial expression, vocal change, and body movement) specific to character feelings. Embodied behaviors supported student recall of story character feelings and emotion words. DBI intervention students used more embodiment, specifically gesture, when recalling story character feelings compared to their control group peers. Finally, hearing a DBI story supported students' emotion word recall, particularly for 3- and 4-year-old students. The findings from this study offer evidence for incorporating drama-based teaching strategies into story time to promote students' inferencing skills regarding story character internal states and subsequent story comprehension.



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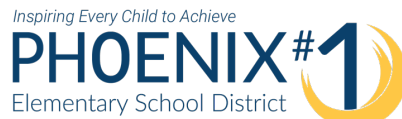
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Ivanhuis@asu.edu

Thank you!

- Participating students, families, teachers, and districts
- Coauthors
- Research assistants, coders, and graduate students
- Partners at Childsplay and teaching artists
- US Department of Education Assistance for Arts Education Development and Dissemination (AAEDD) Program



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