



Beyond Parents' Elaborations: Children's Memory Questions in Reminiscing Conversations are Related to Early Metacognitive Monitoring

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INTRODUCTION

- A rich literature has documented how the use and effectiveness of appropriate strategies for remembering improve across the elementary school years (Ornstein, Haden, & San Souci, 2008).
- Researchers have been interested in examining aspects of children's everyday lived experiences that are thought to support the development these skills during the transition to elementary school, such as parent-child reminiscing conversations. Specifically, parents' *elaborations* have been linked to children's autobiographical memory skills (Fivish et al., 2006) and deliberate memory skills (Langley et al., 2017).
- However, two gaps in the literature persist: a) the way in which reminiscing conversations may support other components of children's skilled remembering, such as *metacognition*, has been relatively unexplored, and b) children's contributions in these conversations have not been a focus of the literature.
- In younger children, components of metacognition, such as *monitoring* has been examined through information-seeking behaviors, such as asking questions or children's detection of a comprehension or compliance issue when presented within ambiguous goal (Revelle et al., 1985; Flavell et al., 1981).
- Therefore, the following study aims to examine parent and child contributions in reminiscing conversations as they relate to children's emergent metacognitive monitoring and deliberate strategy use on an Object Memory Task.

AIMS OF THE STUDY

In the is exploration of the connections between parent-child reminiscing and children's cognitive skills, we aim to:

- Describe children's contributions to reminiscing conversations as a foundational skill in the development of early metacognition.
- Examine associations between parents' elaborations, children's memory questions, and children's deliberate memory and metacognition.

METHODS

- Data for this study were drawn from an ongoing longitudinal study of children's memory and cognitive skills as they transition into elementary school.
- Child-, home- and school-level measures were collected across the kindergarten year.
- Continuing data collection will allow for multi-level assessments through the beginning of the second grade.

PARTICIPANTS

Participants were drawn from 5 schools and included 98 kindergarteners:

- 43 Males, 55 Females
- Age Range: 4.93 to 6.47 years
- 54% Caucasian, 31% students of color

MEASURES

Mother-Child Reminiscing Task: MRM (Reese et al., 1993)

- Mothers were asked to choose two novel, shared, one-time events to talk about with their child in whatever way felt natural for them.
- Conversations were audio-recorded, transcribed and then coded using a structural/functional coding system (adapted from Reese et al., 1993).
- Particular attention was paid to mothers' elaborations and children's self-initiated memory questions.

Parent Codes		Definition
Elaborations	Statement Elaboration	Utterances that provide additional or new information about the event under discussion
	Open-ended Question	Questions that ask the child for new information about the event under discussion
	Yes-no Question	Questions that ask the child to confirm or deny a piece of memory information

Child Codes		Definition
Memory Question		Children's genuine "open-ended" memory questions, asking the mother to provide information

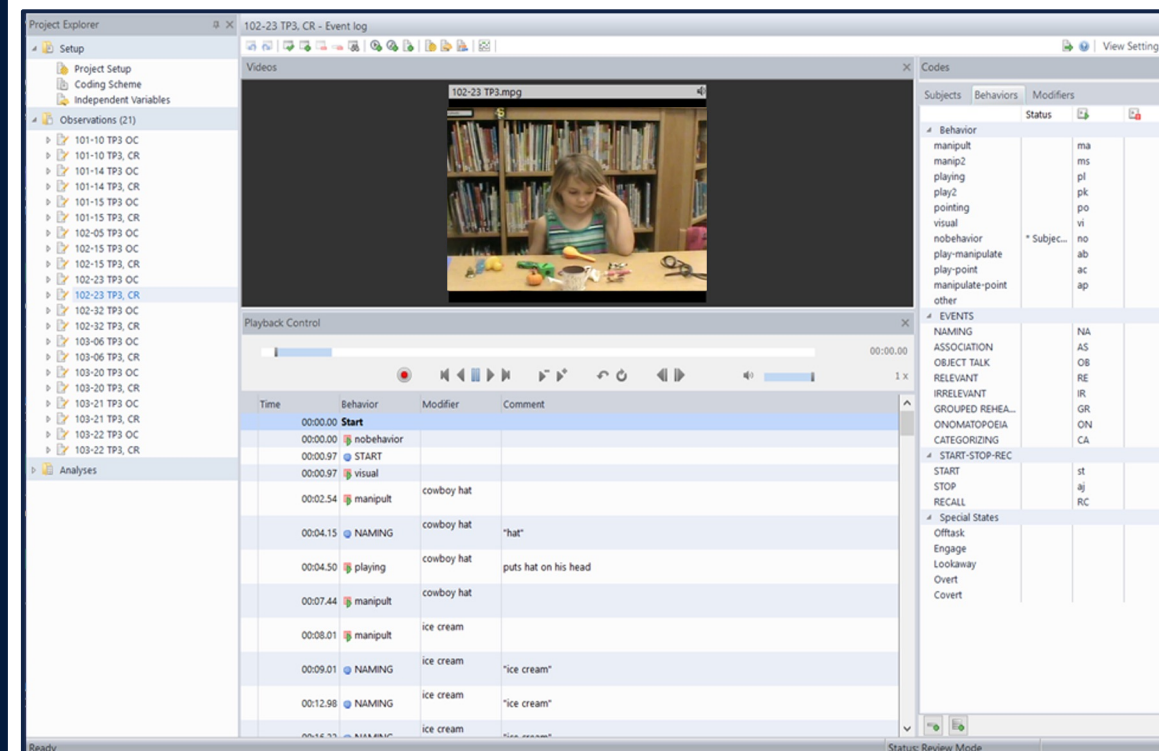
The Object Memory Task: OBJ (Baker-Ward et al., 1984)

- Children were asked to "work to remember" as many objects as possible and given a 2-minute study period prior to a recall trial.
- Spontaneous information-seeking behaviors and deliberate strategies (verbal and behavioral) were coded.



Construct	Indicator	Examples
Strategy Use	Verbal Strategies	naming, object talk, associations, categorizing
	Behavioral Strategies (sec)	manipulations, pointing, visual scanning, dual codes
Metacognitive Monitoring	Information-Seeking Behaviors	asking the research assistant for the name of an unknown object
	Latency to Seek Information (sec)	number of seconds it takes to seek information for the first time

Figure 1. Interface of the Observer XT Behavioral Coding Software



WITHIN TASK RESULTS

Characterizing Reminiscing Conversations

Figure 2. Sample of Coding Parent-Child Reminiscing

M: We ate, did you see anything fun at Cinderella's castle at night time?	Confirmation; General memory question elaboration
C: Fireworks and Tinkerbell!	Memory elaboration x2
M: What did Tinkerbell do?	General memory question elaboration
C: She flew over Cinderella's castle!	Memory elaboration
M: And what did she do? Did she light it up? That was super fun, wasn't it?	General memory question elaboration; Yes-no elaboration x2
C: How did she light it up?	Memory question
M: With her little wand	Statement elaboration

MRM Descriptive Findings

Variable	Min	Max	Mean	SD
Parent Elaborations	7.5	119	38.53	20.56
Child Memory Questions	0	3	.60	.78

Descriptive Statistics for Children's Behaviors in OBJ

Strategy Use Descriptive Findings

Variable	Min	Max	Mean	SD
Verbal Strategies				
Naming				
Associations	0	65	11.40	14.38
Object Talk				
Categorizing				

Behavioral Strategies (sec)	Min	Max	Mean	SD
Manipulations				
Pointing	26	124	96.40	21.88
Visual Scanning				

Composite Strategy Score				
Verbal Strategies	34	234	109.35	30.80
Behavioral Strategies				

Metacognitive Monitoring Descriptive Findings

Variable	Min	Max	Mean	SD
Frequency of Information-Seeking	0	3	0.22	0.55
Latency to Seek Information (sec)	5	156	109.76	33.30

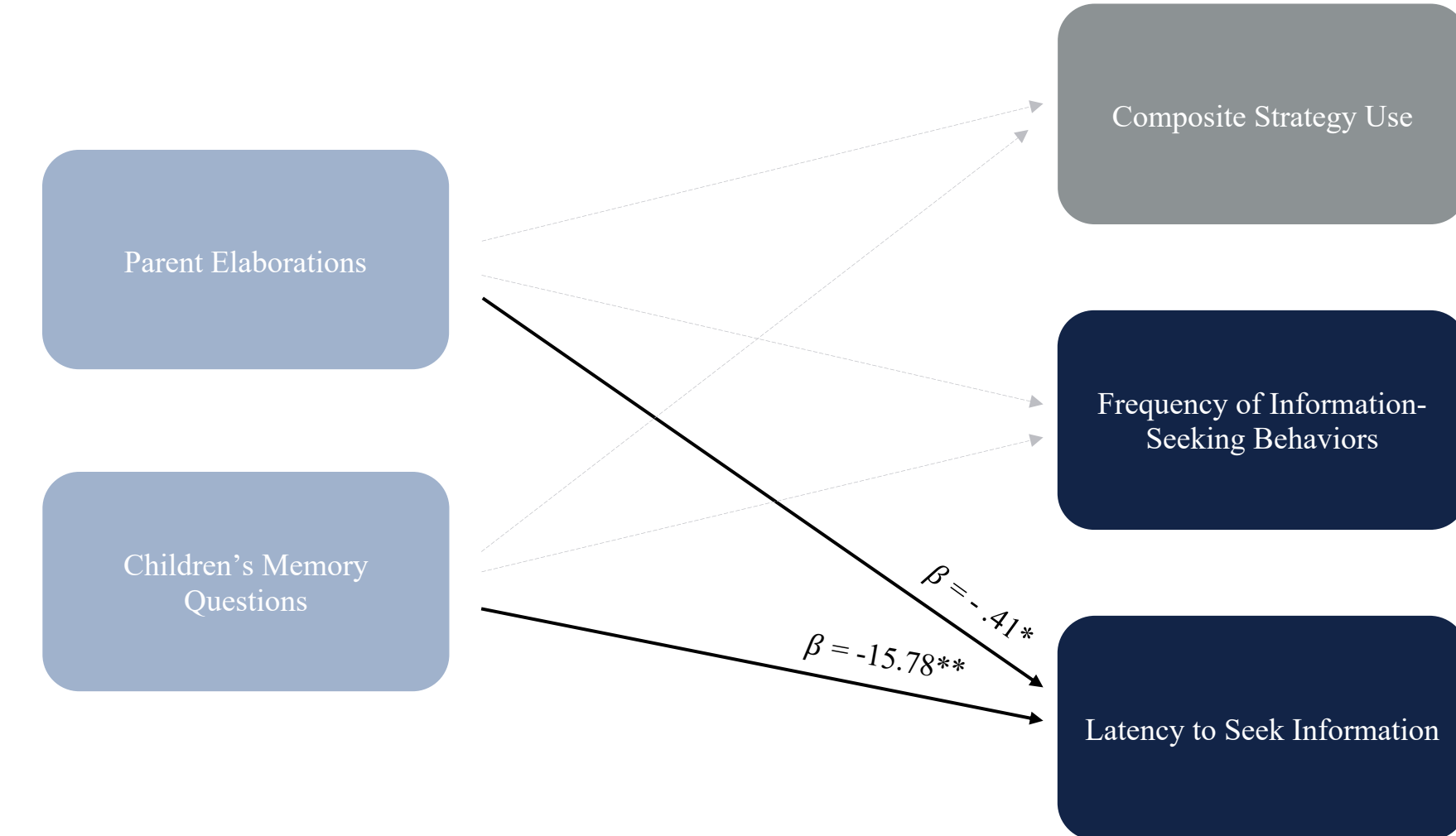
OBJ Within Task Associations

Within-Task Concurrent and Longitudinal Associations

	1.	2.	3.
1. Verbal Strategies	.		
2. Behavioral Strategies	.12	.	
3. Information-Seeking Behaviors	.01	-.04	.
4. Latency to Seek Information	.03	-.02	-.84**

- Children's total number of information-seeking behaviors were associated with their latency to engage in these behaviors. $+p<.10, *p<.05, **p<.01$

ACROSS TASK RESULTS



- Parents' elaborations and children's memory questions in reminiscing conversations did not predict differences in children's deliberate strategy use.
- However, these components of reminiscing conversations did predict differences in children's emergent metacognitive monitoring skills, specifically, the latency to seek information from a research assistant when presented with an ambiguous goal ($\beta = -.41, p < .05; \beta = -15.78, p < .01$).

$+p<.10, *p<.05, **p<.01$

DISCUSSION AND FUTURE DIRECTIONS

- Findings from this study highlight the role of parents' and children's contributions in reminiscing conversations towards children's emergent metacognitive skills during the transition to formal school. More specifically, children that frequently posed open-ended questions to their parents were quicker to autonomously seek out information from a research assistant than their peers who posed few memory questions when reminiscing.
- Additionally, these findings provide information about everyday aspects of children's lives that are thought to support the development of higher-order cognitive processes, such as metacognition. Indeed, early metacognitive monitoring is thought to set the stage for more advanced study techniques into adolescence (Weil et al., 2013).
- However, given that there are almost no short-term longitudinal studies examining children's emergent metacognitive skills (Roebbers, 2017), future work would benefit from examining the role of reminiscing conversations on longitudinal change in children's metacognition throughout the academic year.

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