Examining the Impact of At-home Shared Book Reading on Kindergarten Children's Narrative Retelling and Comprehension

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As part of a 5-yr study on the impact of a community-based book distribution program, this study utilized a narrative retelling assessment to examine the relation between parental report of at-home shared book reading (SBR) prior to kindergarten (K) and children's narrative production and comprehension skills at K entry. Specifically, we asked:

1. What is the relationship between frequency of SBR and engagement in various reading practices during SBR with both macro- and microstructure narrative production skills and with narrative comprehension at K entry?
2. Are narrative production and narrative comprehension skills at K entry associated with text reading level at the end of kindergarten?

EVIDENCE BASE AND RATIONALE

Reading is a meaning-making process, and assessments that focus on narrative retelling and comprehension can yield valuable insights into children's ability to construct meaning through their encounters with text and pictures (Paris & Paris, 2003). Narrative retelling and comprehension assessments are not traditionally used for screening at K entry nor have they, to date, been used to study the impact of book distribution programs. We investigated the use of these measures because:

- An increase of books in the home (via book distribution programs) is thought to catalyze SBR (Ridzi, Sylvia, & Singh, 2014).
- Narrative skills at K entry are thought to develop primarily through interactions with caregivers, with SBR considered to play a major role (Paris & Paris, 2003).
- Narrative skills have been shown to be more closely tied to SBR than to other, more traditionally assessed skills at K entry (Anderson, Atkinson, & Swaggerty, 2018 (see Figure 1)).
- Young children's skill in narrative production plays a role in promoting important literacy skills, with long-term association with reading comprehension that extends to seventh grade (Bitetti & Hammer, 2016).
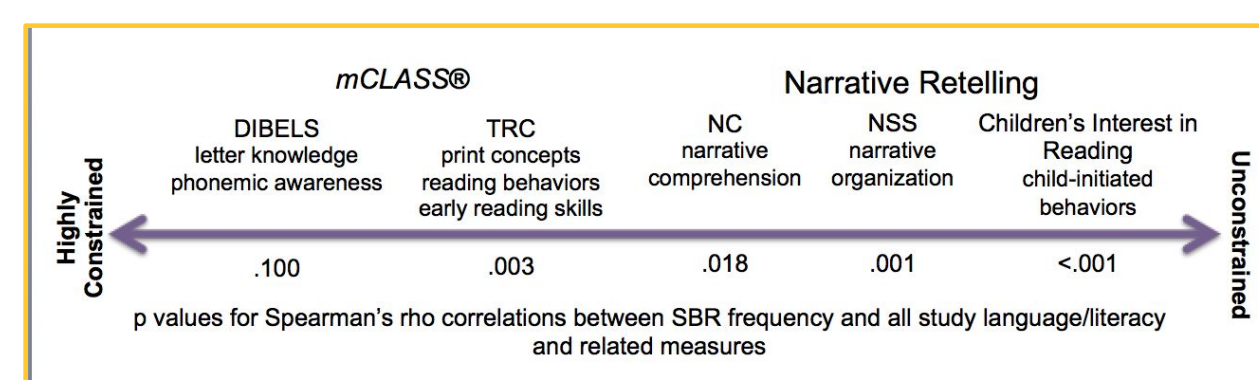

Figure 1.

PROCEDURES

Parent/child dyads (N=144) were recruited from a single school district in the southeastern United States. Parents completed a survey, provided consent for their rising K students to participate in a narrative retelling and comprehension assessment, and provided access to their children's scores on district-administered mCLASS® assessments (see Figure 1).

Children were assessed individually at the beginning of K, using a narrated recording of *Frog Where Are You?* by Mercer Mayer (1969) as a prompt. Children's story retellings were audio-recorded and files were sent to the Systematic Analysis of Language Transcripts (SALT) lab at the University of Wisconsin – Madison, where they were scored for narrative production and comprehension (see measures).

MEASURES

Survey – A 25-question parent survey adapted from the National Household Education Surveys (National Center for Education Statistics, 2007), including family demographic questions and questions related to SBR frequency, reading practices engaged in during SBR, and children's interest in reading. **SBR Frequency (SBR-F)** and **SBR Engagement (SBR-E)** variables were derived through factor analysis - principal components extraction method.

Narrative Production Assessments

Macrostructure

Narrative Scoring Scheme (NSS) - a measure of narrative structure based on story grammar analysis. Stories were scored using a 5-point rubric (max = 35) addressing seven characteristics of narrative stories. (Heilmann, Miller, Nockerts, & Dunaway, 2010).

Characteristics
- Introduction
- Character Development
- Mental and Emotional States
- Referencing / Listener Awareness
- Conflict / Resolution or Event /Reaction
- Cohesion
- Conclusion

Microstructure

Mean Length of Utterance – morphemes (MLU-m) - a measure of grammatical complexity. For each transcribed story, total number of morphemes was divided by the total number of utterances, resulting in the average number of morphemes per utterance (Bitetti & Hammer, 2016).

Subordination Index (SI) - a measure of syntactic complexity, SI is calculated by dividing the total number of clauses by the number of C-units (independent clauses plus their modifiers). (Mills & Watkins, & Washington, 2012)

Number of Different Words (NDW) - a measure of lexical diversity. For each transcribed story, the number of different words (word roots without inflections) was counted (Bitetti & Hammer, 2016).

Narrative Comprehension Assessment

Comprehension Questions (CQ) – A measure under development, questions are based on the six levels of Bloom's Taxonomy (Anderson, Krathwohl & Bloom, 2001; Bloom, et al., 1956), with a hierarchy of question categories (three questions each). Responses were scored using a 0 or 1 scoring system (max = 18).

Categories
- Remembering
- Understanding
- Applying
- Analyzing
- Evaluating
- Creating
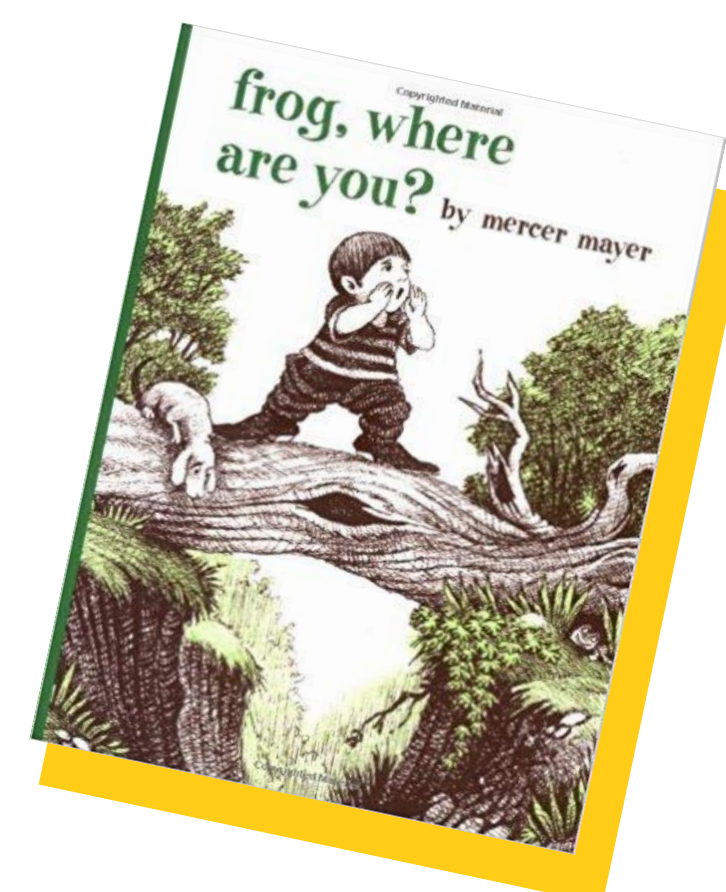
RESULTS

1. At-home SBR prior to K was positively associated with children's narrative production and narrative comprehension at K entry. Findings suggest a differential influence of SBR-F and SBR-E on narrative production and narrative comprehension (e.g., Figure 2 below).
- SBR-F was highly correlated with children's NSS** but was not correlated with CQ.
- SBR-F was more highly correlated with grammatical complexity (MLU-w)** and lexical diversity (NDW)** than with syntactic complexity (SI)*.
- SBR-E was more highly correlated with CQ** than with NSS*.
- SBR-E was not significantly correlated with any of the microstructure measures.

*Note: ** Correlation is significant at the 0.01 level (2-tailed); * Correlation is significant at the 0.05 level (2-tailed)*
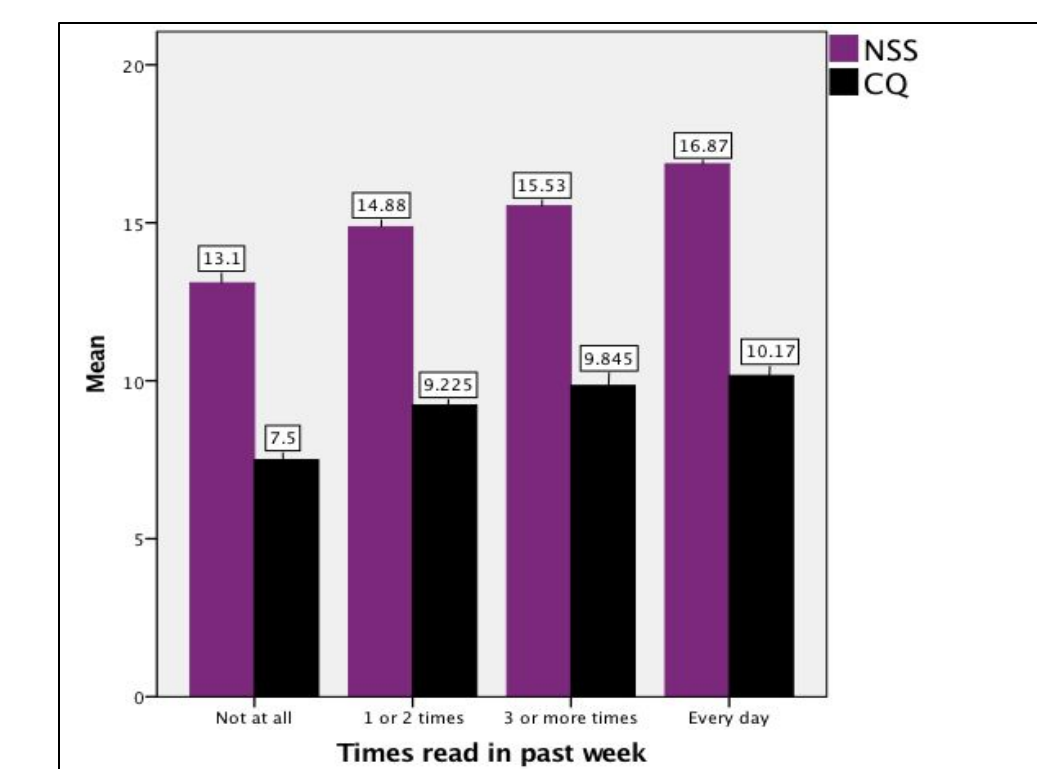

Figure 2. Mean scores on Narrative Scoring Scheme and Narrative Comprehension measures by SBR times per week.

2. NP and NC skills at K entry were differentially associated with text reading level (TRC) at the end of K for children reading **above benchmark (level E or higher)** at the end of the year.
- For all K students, text reading level at the end of K was highly correlated with NSS**, CQ**, MLUm** and NDW** measures at beginning of K.
- For children reading at **level E or higher**, text reading level at the end of K was more highly correlated with NSS** than with CQ*, MLUm* or NDW* at K entry.
- For children reading at **level E or higher**, linear regression (stepwise) results indicated that only two predictors (text reading level (TRC) and NSS at K entry) explained significant portions of the variance in text reading level at the end of K.

SUMMARY AND IMPLICATIONS

This study addressed associations between early language and literacy that go beyond narrowly-defined reading skills and focus on reading as a meaning-making process. We suggest that:
- Narrative skills assessments are appropriate tools for evaluating book distribution programs.
- The use of both narrative retelling and comprehension tasks may provide important insights into the differential influence of various SBR practices.
- The full impact of more books in the home prior to K might not be realized for several years, when children's reading success depends more on meaning construction than on decoding.

REFERENCES – see handout