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A standardized tool for assessing the quality of classroom-based shared reading: Systematic Assessment of Book Reading (SABR)☆

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ABSTRACT

Participation in shared-reading experiences is associated with children's language and literacy outcomes, yet few standardized assessments of shared-reading quality exist. The purpose of this study was to describe the psychometric characteristics of the Systematic Assessment of Book Reading (SABR), an observational tool designed to characterize the quality of classroom-based shared-reading sessions in early childhood settings. Participants included 105 preschool teachers. The quality of teachers' videotaped, whole-class shared-reading sessions was examined using the SABR. Reliability levels for each of the SABRs five constructs were examined, as well as delayed alternate-form reliability and inter-rater reliability. The tools' factor structure and construct validity were also assessed. Findings provide initial validation and preliminary evidence that the SABR is a reliable and valid tool. Potential uses for early childhood researchers, teachers, and allied professionals are described.

1. Introduction

Measuring the quality of classroom-based shared reading (or read-alouds) within the early childhood classroom represents a specific dimension of teacher–child interactions that is of great interest to researchers and practitioners. This interest reflects the rich literature demonstrating the benefit of reading to young children in both the home and the classroom (for reviews, see Bus, van IJzendoorn, & Pellegrini, 1995; Mol, Bus, & de Jong, 2009; National Early Literacy Panel, 2008). Shared reading in the classroom context can be defined as the interactions and discussions that occur when a teacher and children look at a book together and can include large- and small-group interactions. As a substantive focus in many research papers (e.g., Blewitt, Rump, Shealy, & Cook, 2009; Hindman, Connor, Jewkes, & Morrison, 2008; Justice, Kaderavek, Fan, Sofka, & Hunt, 2009), shared reading is sometimes studied naturalistically with respect to how adults and children participate as well as experimentally, to assess how modifications to this activity can affect children's learning. Further, as shared reading is a routine practice in many early childhood classrooms (Dickinson, De Temple, Hirschler, & Smith, 1992), researchers for some time have sought to determine the impacts of both the quantity and the quality of shared-reading sessions that take place in these environments. Scarborough and Dobrich's (1994) review of more than three decades of research regarding young children's shared-reading experiences suggested that although the frequency with which children are exposed to shared reading is important, the quality of these experiences may be of even greater import. In fact, specific qualities of teacher–child interactions during shared reading serve as significant predictors of children's language and literacy skills (e.g., Dickinson & Smith, 1994; Hindman et al., 2008; Justice et al., 2009).

Despite this widespread interest in the shared-reading experiences of young children from among those in both the research and the practice communities, to date, there are very few standardized tools available for quantifying or qualifying young children's reading experiences. This presents a salient limitation to research, in particular, as it limits the comparison of findings across studies

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regarding what appear to be critical characteristics of shared-reading sessions, including those qualities that most contribute to important child outcomes. The Systematic Assessment of Book Reading (SABR; Justice, Zucker, & Sofka, 2010), our focus in this study, was developed to provide a systematic observational tool that captures characteristics of shared reading as implemented in early childhood classroom settings. In its development, we surveyed the research literature for empirical and theoretical descriptions of adult shared-reading behaviors that were commonly included in observational schema of both qualitative and quantitative varieties. On the basis of our assessment of the literature, the SABR systematically examines adult behaviors within the shared-reading context that appear to provide instructional support to children's (a) vocabulary and oral language skills, (b) abstract thinking skills, (c) print-related and phonological awareness skills, and (d) elaborative responses to the text. In addition, the SABR also captures more general features of the reading session, including: (e) adult behaviors that create a warm, supportive setting for shared reading. Here, we provide a brief summary of relevant literature on adult behaviors that appear to provide support for children in these areas.

1.1. Vocabulary and oral language skills

A number of research reports and theoretical depictions describe overt behaviors (or techniques) that adults use to support children's vocabulary specifically and oral language more generally, within the shared-reading context. These behaviors include adult labeling and describing of objects and actions within the text, adult recasting children's utterances, as well as adult defining of novel or important words in the text (e.g., Beck & McKeown, 2007; Hargrave & Sénéchal, 2000; Penno, Wilkinson, & Moore, 2002). The former (labeling, describing, recasting) are similar to those techniques used to elicit conversation in dialogic reading, a shared-reading practice which generally is associated with gains in children's expressive vocabulary (e.g., Hargrave & Sénéchal, 2000; What Works Clearinghouse, 2007; Whitehurst et al., 1994). The latter, adult defining of important words, refers to the simple practice of embedding explanations of word meanings within the shared reading of a text (Beck & McKeown, 2007; Johnson & Yeates, 2006; Penno et al., 2002). Work by Penno et al. (2002), for instance, shows that young children made greater vocabulary gains when exposed to shared-reading sessions in which the teacher provided a contextualized explanation of target vocabulary words compared to children who were exposed to shared readings where no explanation was provided.

1.2. Abstract thinking skills

Within the shared-reading context, adults can also use specific behaviors that support children's abstract thinking skills. These include adult behaviors such as encouraging children to compare/contrast, evaluate, hypothesize, and reason. These "cognitively challenging processes" form the foundation for later reading comprehension and are also referred to as inferential or decontextualized language, as these behaviors require thinking beyond what is perceptually present in the text and illustrations (see van Kleeck, 2003). Findings from a number of experimental and descriptive studies suggest that children's vocabulary and story understanding are improved when educators encourage abstract thinking (e.g., Beck & McKeown, 2007; Dickinson & Porche, 2011; Dickinson & Smith, 1994; Hindman et al., 2008; Reese & Cox, 1999; van Kleeck, Vander Woude, & Hammett, 2006; Wasik & Bond, 2001). Moreover, recent research findings show that young children are readily able to participate in cognitively challenging conversations within the shared-reading context (Zucker, Justice, Piasta, & Kaderavek, 2010), although they are unlikely to move conversation to this level on their own without an adult's explicit prompting (Danis, Bernard, & Leproux, 2000).

1.3. Print-related and phonological awareness skills

Certain adult behaviors occurring during shared-reading sessions can explicitly support young children's print-related skills and phonological awareness (e.g., Justice & Ezell, 2000, 2002; Ukrainetz, Cooney, Dyer, Kysar, & Harris, 2000). Explicit print-referencing behaviors include teachers' commenting and questioning about book or print conventions, letter sounds, letter names, individual words, and/or the sounds of language (e.g., rhyme, syllables). Research findings show that it is possible and beneficial to include teaching about print and phonological awareness within the shared-reading context, and that children gain knowledge about print and sound when these concepts are explicitly referenced (e.g., Justice et al., 2009; Murray, Stahl, & Ivey, 1996; Ukrainetz et al., 2000). For instance, studies demonstrate that adults' use of explicit, print-related references during shared reading may influence young children's print knowledge (Girolametto, Weitzman, Lefebvre, & Greenberg, 2007; Justice & Ezell, 2000, 2002; Justice et al., 2009) and that embedding explicit discussion about the sounds of language (e.g., initial sound identification, phoneme segmentation) into shared reading significantly increases children's phonemic awareness (Murray et al., 1996; Ukrainetz et al., 2000).

1.4. Elaborations that encourage child responses

During the shared-reading session, adults may encourage children's responses to the text through elaborating upon textual elements and children's own comments about the text. These elaborations are important for crafting an interactive experience for the child (Mautte, 1990). Salient elaborative behaviors adults can use to create interactive reading experiences include encouraging children to link the text to their own experiences (commonly called text-to-life connections), elaborating on key concepts in the text with rich discussion, and encouraging children to dramatize or imitate portions of the text. Teachers' moves to elaborate on the text's meaning or children's spontaneous contributions during reading can support children's understanding of the text (Justice, Meier, & Walpole, 2005; Morrow, 1985; Penno et al., 2002; Wasik & Bond, 2001; Wasik, Bond, & Hindman, 2006). Additionally, teachers can intentionally elaborate on characters' feelings or emotions described in texts (Domitrovich, Cortes, & Greenberg, 2007) to increase children's emotional competence, which includes children's understanding of their own and others' emotions and how to regulate both aversive and pleasurable emotions (Denham, 1998). Finally, adults can responsively support children's language by responding to children's spontaneous initiations with a contingent verbal response that elaborates on the topic of interest to the children (Landry et al., 2011; Yoder, Davies, Bishop, & Munson, 1994).

1.5. Shared-reading session climate

The previous discussion identified specific instructional or pedagogical techniques adults can use during reading; however, adults can also use intentional behaviors to craft a warm, supportive shared reading session climate within which specific instructional practices are embedded. There are a wide array of adult behaviors that may foster warm, supportive sessions; however the behaviors examined in the present study include providing opportunities for children to control the book during reading (e.g., pointing to illustrations in the book), offering children positive feedback, and modeling respectful etiquette (e.g., teachers use of

the terms 'please' and 'thank you'). Teachers' supportiveness, warm affect, and sensitivity appear to be influential to children's long-term academic and behavioral outcomes (Hamre & Pianta, 2001; Howes et al., 2008; Peisner Feinberg et al., 2001); conversely, the absence of adult sensitivity during literacy activities may negatively impact children's language and literacy outcomes (Gest, Freeman, Domitrovich, & Welsh, 2004; Leseman & de Jong, 1998; Roberts, Jurgens, & Burchinal, 2005). In fact, the social/affective quality of reading in parent–child shared-reading interactions has been found to be predictive of children's motivation to read, as children who experienced positive reading interactions in kindergarten reported more positive motivation to read in first grade (Sonnenschein & Munsterman, 2002). Therefore, the social-emotional aspects of shared-reading sessions may be important to consider, particularly in light of evidence showing that the most beneficial child intervention programs coordinate academic goals with social-emotional learning (Greenberg et al., 2003).

2. Existing measures of shared-reading quality

In the previous section, we identified potentially important behaviors that adults can use during shared-reading sessions so as to promote children's learning. At present, there is a significant need for standardized observational assessments of shared-reading quality that can be used by researchers and practitioners to document the types of shared-reading experiences, and the adult behaviors embedded within them, to which children are exposed in early childhood classrooms. For the research community, such a tool would permit firmer compilation and comparisons of findings across studies examining children's experience in shared-reading sessions. In fact, although there are meta-analyses available that describe child outcomes attributable to participation in shared-reading experiences (e.g., Mol et al., 2009; National Early Literacy Panel, 2008); these analyses provide limited information about the qualitative dimensions of shared-reading experiences that may serve as important mediators and moderators of children's outcomes. This is concerning because the qualitative dimensions of these experiences may be most influential to the benefits children derive from shared-reading experiences (Scarborough & Dobrich, 1994). By way of comparison, meta-analyses focused on parenting interventions and their relations to child outcomes (e.g., Kendrick et al., 2000) often rely upon the common use of a standardized observational tools (e.g., The Home Observation for Measurement of the Environment Inventory; Caldwell & Bradley, 1984), for describing potential mediators and moderators of parenting-intervention outcomes. In the shared-reading intervention literature, there is no single tool that has served to unite or integrate this body of work.

Beyond addressing these needs of the research community, standardized documentation of children's shared-reading experiences also provides an important step in working toward the goal of providing all children with the kinds of high-quality shared-reading experiences that are associated with improved language and literacy outcomes. For instance, observational tools that systematically describe teachers' reading behaviors in their classrooms may be used to support coaching and other types of individualized professional development (PD; Piasta et al., 2010; Zucker & Landry, 2010). Currently, whether used for research or practical purposes, the most prominent approach to assessing and documenting shared-reading practices within early education settings appears to use custom measures, given that there are very few standardized tools available, with a few exceptions discussed here.

2.1. Commercially available tools

Three commercially available tools currently exist to assess adult–child shared-reading interactions: the *Adult/Child Interactive Reading Inventory* (ACIRI; DeBruin-Parecki, 2006), the *Observation Measure of Language and Literacy Instruction-Read Aloud Profile* (OMLIT-RAP; Goodson, Layzer, Smith, & Rimdzius, 2006), and the *Early Language and Literacy Classroom Observation Pre-K Toolkit* (ELLCO Pre-K; Smith, Brady, & Anastasopoulos, 2008). Although each of these tools makes a contribution, they have important limitations for studying classroom-based shared reading. First, the ACIRI assesses qualities of dyadic parent–child shared reading with rating scales, but contains aspects that make it unsuitable for classroom use. Specifically, this measure was not designed for observing educators but rather for observing parents, and thus is designed to assess dyadic interactions. Consequently, some items are not feasible or applicable in typical group classroom reading sessions. Further, the 4-point rating scale provides a limited picture of the frequency with which the adult employs language and literacy strategies, which may be important to investigate given that the frequency of certain adult reading behaviors are associated with certain child outcomes (e.g., Dickinson & Smith, 1994; Hindman et al., 2008).

Second, the OMLIT-RAP was designed for early childhood classrooms but estimates reading quality rather narrowly with a combination of binary coding of whether various behaviors were present/absent for the entire reading session and with three rating scales. These types of simple checklists and 5-point rating scales provide a limited picture of the frequency with which the adult employs language and literacy strategies, which may be important to investigate given that the total frequency of certain adult reading behaviors is associated with certain child outcomes (e.g., Dickinson & Smith, 1994; Hindman et al., 2008). Additionally, the OMLIT-RAP coding system fails to capture potentially important dimensions of the shared-reading experience. For example, the coding system does not capture the adult's sensitivity to children's contributions during reading or document if the adult draws children's attention to story character's social-emotional actions or feelings. From a psychometric perspective, the OMLIT-RAP has some questionable features because inter-rater agreement is calculated "within one point agreement" (Goodson, Layzer, Smith, & Rimdzius, 2005) on three rather restricted range rating scales (inter-rater agreement is not provided for checklist items).

The third tool, the ELLCO Pre-K, is the most widely used but is typically considered a more global rating of the classroom environment/structure, although it does have some subscales specifically related to book-reading approaches and availability of books in the classroom. The newest iteration of this tool includes one subscale that does focus on the shared reading process and uses a 5-point rating scale to measure the extent to which teachers thoughtfully select the book, prepare for, and conduct an engaging reading session. Both the ELLCO Pre-K and the OMLIT-RAP fail to capture potentially important dimensions of shared reading, such as adult's sensitivity to children's contributions during reading or adults' use of a range of print/phonological aspects of the text. Therefore, a tool such as the SABR, which looks at a larger range of items provides the possibility to study educators' shared reading across a much broader range of salient behaviors.

2.2. Custom tools

Looking beyond commercially available assessment tools, the existing research literature on shared reading contains abundant examples of shared-reading coding schemes. These coding schemes have largely been created as fidelity tools to document

use of various interventions or to study naturally occurring adult behaviors during reading (e.g., Assel, Landry, & Swank, 2008; Beck & McKeown, 2007; Biemiller & Boote, 2006; Blewitt et al., 2009; Danis et al., 2000; Dickinson & Smith, 1994; Ezell & Justice, 1998; Hindman et al., 2008; Justice, Weber, Ezell, & Bakeman, 2002; Pentimonti & Justice, 2010; Whitehurst et al., 1988).

Although researcher-developed tools may be appropriate for an early childhood setting, they are neither standardized nor comprehensive and often are unavailable to the general public. Also, many researcher-developed instruments require the book-reading session to be transcribed and subsequently coded. Transcription and coding requires substantial time and resources and may result in an investigator interpreting data from a single classroom reading session (e.g., Dickinson et al., 1992; Dickinson & Smith, 1994; Hindman et al., 2008) rather than sampling multiple sessions. Multiple-session analysis is likely to ensure a more complete and accurate spectrum of the overall quality of children's shared-reading interactions, which may be particularly important when assessing teacher behaviors across reading of different types/genres of texts.

3. Goals of this study

The SABR represents an empirical effort to address the limitations of existing measures of shared-reading quality and to provide the research and practice community with a common metric. The SABR focuses exclusively on adults' extra-textual behaviors and uses a comprehensive definition of shared-reading quality as well as quantity of instruction embedded within the shared-reading session. Specifically, the SABR documents aspects of teacher talk that provide children with language-, and literacy-support; it also documents how teachers organize book-reading interactions to promote child involvement. In sum, SABR codes capture *what* the teacher is doing to teach students within the reading context and *how* the teacher organizes and delivers the shared-reading session.

Beyond this substantive focus, our intent was to create a tool that was (a) standardized, (b) comprehensive, (c) practical (i.e., geared toward early childhood classrooms), and (d) psychometrically sound. A standardized tool, defined as an assessment that offers consistent procedures and uniform application, has the potential to compile and compare findings across book-reading studies. A comprehensive tool is needed because researchers and educators need to capture a wide range of adult behaviors as they occur within shared book reading: Important behaviors for promoting children's short- and long-term language and literacy skills include encouraging abstract thinking, and referencing print (Dickinson & Porche, 2011; Hindman et al., 2008; Zucker, Cabell, Justice, Pentimonti, & Kaderavek, 2011). A practical observation tool is need so that educators and literacy coaches can effectively and efficiently evaluate the quality of adult-lead shared-reading interactions as it occurs in early childhood classrooms – a critical learning opportunity linked to children's later academic success (Bus et al., 1995; Mol et al., 2009; National Early Literacy Panel, 2008). Finally, it is imperative that tools, such as the SABR, are psychometrically sound. While the overall design of the SABR ensures that it adheres to the first three foci identified previously (i.e., standardized, comprehensive, and practical), empirical investigation is necessary to determine the psychometric soundness of the tool.

To this end, the present work presents a systematic investigation of the psychometric characteristics of the SABR; two specific research aims were addressed. The first aim concerned reliability of the SABR by examining the tool's internal consistency, delayed alternate-form reliability, and inter-rater agreement, whereas the second aim concerned validity of the SABR by examining the tool's factor structure and construct validity.

4. Method

4.1. Participants

Participants in this study were 105 teachers enrolled in two larger studies of classroom reading practices. The teachers taught in preschool classrooms in two states. Of these classrooms, 35 were state funded targeted-enrollment programs, 29 were Head Start, 29 were Early Childhood Special Education, and 12 were private. Of the 105 teachers, 95% ($n = 100$) were female. In terms of educational background, 26% ($n = 21$) held Master's degrees, 45% of teachers ($n = 37$) held Bachelors' degrees, and 29% ($n = 24$) held 2-year Associate's degrees. On average, teachers had 15 years of teaching experience ($SD = 10$). The majority of teachers were Caucasian (72%, $n = 76$), whereas 20% ($n = 21$) were African American, 3% ($n = 3$) were Latino, and 3% ($n = 3$) were multi-racial, while (2%, $n = 2$) reported their ethnicity as 'Other.' The majority of teachers (87%, $n = 91$) reported using one of two commercially developed curricula (e.g., High Scope, Creative Curriculum). Class size in Early Childhood Special Education classrooms was set at 12 and for all other classrooms, class size averaged 17 students ($SD = 4$). Instruction in all classrooms was provided only in English. All of the teachers were volunteers in this study and provided informed consent to participate in a set of activities that spanned the entire academic year.

As part of procedures for the larger study, approximately six children per classroom were chosen for participation, resulting in available demographic information for 697 children. The mean age of children at the outset of the academic year was 4 years, 4 months ($SD = 5$ months). Of these children, 54% were male. Most children were either Caucasian (50%, $n = 349$) or African American (30%, $n = 212$); additionally, 7% ($n = 49$) were Hispanic and 6% ($n = 42$) were Multi-racial. Annual incomes of families ranged from $5000 or less to $85,000 or more, with a large part of the sample reporting an annual income of $40,000 or less (58%, $n = 402$).

4.2. General procedures

Educational agencies in two states were invited to participate in one of the two studies of classroom practices. The teachers participated in the 2005–2006, 2006–2007, or 2008–2009 academic years. As part of both studies, teachers were asked to implement a 30-week book reading program featuring two to four whole-class readings per week. Some teachers received training on how to implement a "print-referencing reading style" ($n = 71$) in which they incorporated explicit conversations focused on print within their whole-class readings (see Justice et al., 2009). The other teachers read using their typical style ($n = 34$), but received equal training time on other aspects of shared reading (e.g., how to manage behavior during reading, story extension activities).

A requirement of the larger studies was that all teachers were required to videotape a researcher assigned shared-reading session every 2 weeks (reading titles as required by the larger research study) and submit these to project staff for analyses. The researcher-assigned session stipulated the title of the book being read as well as the week of the reading session. It is possible that the reading interactions examined, given that the book was prescribed by the researchers, may have limited the breadth and depth of teacher behaviors; we raise this as a limitation later in this manuscript. All shared-reading sessions were conducted in the whole-group setting. The prototypical reading experience involved the educator sitting on a chair and reading with the book facing the children in the classroom, whom were often sitting on a large rug or carpet in a central area in the classroom. These videotaped sessions were used to assess teachers' fidelity to assigned reading conditions and also to assess overall quality of the whole-class reading

Table 1
Text characteristics.

Text	Genre[a]	Pages	Words	Word roots	TTR[b]	Rare words
Rumble in the Jungle	Narrative	24	521	281	.54	44
I Stink!	Narrative informational	30	362	247	.68	58

[a] Text genre was coded using the definitions detailed in Pentimonti, Zucker, and Justice (2011).
[b] Type token ratio.

sessions. To facilitate this aspect of the research studies, all teachers were given a digital video camera, tripod, digital video disks (DVDs), and stamped addressed mailers. Videos were mailed to the research site every 2 weeks. Teachers were permitted to keep the video camera at the end of the study.

4.3. Selected books

For the purposes of this study, teachers' whole-class readings of one or two texts were analyzed. Teachers videotaped themselves reading these texts within their own classrooms using materials provided for this purpose (video camera, recording media) and then sent the recording to a central research site. The first text, *Rumble in the Jungle* (Andreae, 1996), was used for the majority of analyses ($n = 105$), whereas the second text, *I Stink!* (McMullan & McMullan, 2002), was analyzed for a subset of teachers ($n = 76$), for whom this reading session was analyzed in addition to the *Rumble in the Jungle* reading session. These books were chosen for comparison for two reasons. First, they were read during the middle of the 30-week study (i.e., both read-alouds occurred toward the end of the fall semester during week 8 and week 16 of the study), as previous research has suggested that mid-year observations tend to be the most representative of teacher practice (Hamre, Pianta, Downer, & Mashburn, 2007). Second, the texts were relatively equivalent across several text characteristics. For example, both texts were narratives that included poetic language features (e.g., rhyme, alliteration). *Rumble in the Jungle* contains a rhyming text, while *I Stink!* includes alliterative text and an embedded alphabet structure. To further compare the similarities and differences of the two selected texts, we transcribed each page verbatim using the *Systematic Analysis of Language Transcripts* software (SALT; Miller & Chapman, 2002). A research assistant who completed a transcription-training program and achieved 90% accuracy across three unfamiliar transcripts conducted transcription using standard SALT conventions. These transcripts allowed us to calculate several aspects of the linguistic complexity for each text that are shown in Table 1, including: (a) total pages, (b) total words, (c) number of unique word roots, (d) type-token ratio, and (e) total rare words. To identify the total rare words in each title, a list of all words in the text was generated from the transcripts. Through identification and examination of these several text characteristics, we concluded that *Rumble in the Jungle* and *I Stink!* were similar enough to allow test-retest comparisons.

4.4. Measuring shared-reading quality with the SABR

4.4.1. Coding procedures

As stated, teachers were provided with video equipment and asked to mail videos of their shared-reading sessions to research staff. From those videos, all extratextual teacher talk was coded using the SABR. The entire tool, including the score sheets and training manual can be downloaded at (clrc.ehe.osu.edu/resources/assessments). The SABR coding was conducted by four trained graduate student coders who completed a comprehensive training program that included completion of a standardized protocol created to achieve reliability (to be described subsequently).

Coding of the SABR requires the following materials: (a) copy of the SABR score sheet and manual, (b) video of a shared-reading session to be coded, and (c) DVD player that displays elapsed time (e.g., Windows Media Player). Additionally, for our purposes, coders had a copy of the book the teacher read aloud with the pages numbered, as we were interested in recording the focal page of the book that corresponded to codable behaviors. The protocol specifies that coding starts at the moment when book-related discussion begins and ends when the teacher's attention shifts away from book-related discussion or when s/he transitions to another activity. The entire shared-reading session is coded up to 30 min, at which point coding stops even if the reading session continues. Coding one session typically required approximately twice the amount of time of the actual shared-reading session (e.g., a 15-min shared reading session would take approximately 30 min to code).

4.4.2. SABR items and categories

In total, SABR comprises 21 codes separated into five categories (i.e., Language Development, Abstract Thinking, Print/Phonological Skills, Elaborations, Session Climate). As previously stated, these 21 codes were chosen through a process of surveying the research literature for empirical and theoretical descriptions of adult shared-reading behaviors. See Appendix A for the SABR score sheet which includes all categories and codes and Appendix B for example teacher utterances by code.

4.4.3. Coding and scoring

Coding of the SABR occurs at the level of 15-s intervals as coders view and pause the videotaped book reading sessions. Thus, transcription is not necessary, but coders are allowed to pause and review the videotaped book reading sessions for clarification, as necessary. The coding system is neither mutually exclusive nor exhaustive, such that not all teacher talk is coded and a variety of codes may be assigned to a single teacher utterance. For example, the comment, "*There's an S just like your name*" is coded as both 'Encourage children to make text-to-life connections' and 'Discuss letters or words.'

For the five categories of codes (Language Development, Abstract Thinking, Elaborations, Print/Phonological Skills, and Session Climate), a 15-s interval coding scheme is used to document the frequency of specific extratextual teacher behaviors. Interval coding requires coders to record observations within a 15-s period of time. We found that the 15-s interval is short enough to facilitate reliability and still long enough to ensure the coding process does not become cumbersome for coders. Additionally, extant coding schemes have supported the reliability of coding events based on 15-s periods of time (see Connor et al., 2009). To implement this SABR coding scheme, the coder watches the video for 15 s and, at the end of the interval, pauses to record all codes that occurred in that interval. When coding, coders place a diagonal slash in the appropriate cell on the score sheet to reflect that a codable behavior occurred in an interval. Only one slash is needed across the cell, even if the behavior is seen more than once in that interval.

Finally, all codable extratextual behaviors are summed by item to compute the final score. As an example, a summed 'Ask for or provide noun label' item score of 12 would indicate that during 12 different intervals the teacher labeled a noun in the text (e.g.,

a comment such as 'See the giraffe?' or 'The title is *Rumble in the Jungle*.'). The teacher may have made more than 12 utterances that included noun labeling, but the level of coding is 15-s intervals, not individual utterances, as the utterance level would have required transcription. These summed item scores are then summed to form construct scores (e.g., scores for the three items, 'Encourage children to touch book', 'Positive feedback', and 'Model respect' were summed to form the 'Session climate' construct score). For this study, we report and analyze summed scores (i.e., frequency totals for each item); however, evaluating individual items or sequences of observed behaviors may be useful for other research purposes.

4.4.4. Coding reliability procedures

To complete this training protocol, trainees first studied the SABR manual, which includes an overview of the tool, detailed descriptions of SABR codes, information on scoring procedures, and information on reliability training. Second, trainees viewed SABR video training modules and corresponding PowerPoint presentations which include specific video examples of teachers' use of all codable behaviors. Third, trainees coded at least three practice videos using the SABR coding system. After completion of practice video coding, trainees reviewed master-coded transcripts of these shared-reading sessions to verify and correct scores. For these training purposes only, the reading session was fully transcribed so that master codes could be shown for each interval with detailed rationales for why particular codes should be marked. Finally, to become reliable in SABR coding, coders were required to score a set of five master-coded (consensus-scored) videos and achieve an exact agreement mean reliability score of $\geq$85% across the videos. The entire reliability process took approximately 8 h per coder, which is less than the amount of training required of other high-inference standardized coding schemes, such as the *Classroom Assessment Scoring System-PreK* (CLASS Pre-K; Pianta, La Paro, & Hamre, 2005).

4.5. Measures of classroom quality

To establish convergent validity of the SABR, two observational tools were used that provide measures of global classroom and environmental quality. First, as a convergent measure of instructional quality, we utilized the Instructional Support domain from the CLASS. We expected the CLASS Instructional Support scores to relate to the four instructional constructs of the SABR, that is Language Development, Abstract Thinking, Elaborations, and Print/Phonological skills. The CLASS Instructional Support score is derived from the sum score of three scales: Concept Development, Quality of Feedback, and Language Modeling. CLASS scales are rated on a 7-point Likert-type continuum (1, 2 = low levels of observed construct; 3, 4, 5 = moderate levels; 6, 7 = high levels).

In this sample, CLASS scores were obtained from 45-min videotaped sessions of large-group, small-group, and/or classroom-center activities. It should be noted that videos of shared reading were captured by teachers, whereas the CLASS videos were collected by research staff at fall and spring of the year to calculate an average index of classroom quality that may or may not have included shared reading activities. Classroom videos were then coded in the research lab by reliable CLASS coders. Reliability protocols for these coders included attending a 2-day training workshop given by a certified CLASS master coder and achieving 90% agreement with six gold-standard master coded videos. For the purposes of the present study, CLASS Instructional Support scores were averaged across fall and spring as this provides a more reliable assessment of classroom practices throughout the year (see Mashburn et al., 2008). As measured on this sample, internal consistency for the three items on the Instructional Support domain was high (α = .92). Examinations of the criterion validity of the CLASS indicate that the Instructional Support domain is significantly and moderately correlated with the Early Childhood Environment Rating Scale's (Harms, Clifford, & Cryer, 1998) Interactions and Provisions subscales (r = .34 and .26, respectively; Pianta et al., 2005). Possible scores on the Instructional Support domain ranges from 0 to 7, teachers in our sample had a mean score of 3.39 (SD = 1.01, range of 1.67–6.17).

The second measure used for convergent validity was portions of the *Early Language and Literacy Classroom Observation Pre-K Toolkit* (ELLCO Pre-K; Smith & Dickinson, 2002). We expected selected scales of the ELLCO's General Classroom Environment ratings to be related to one construct of the SABR – the Session Climate construct – because both assess the overall classroom climate. Specifically, after excluding unrelated scales such as use of technology and available classroom furnishing, we created an ELLCO composite score representing scores on three scales capturing these aspects of general classroom environment: (a) opportunity for child choice and initiative, (b) classroom atmosphere (e.g., interactions between children and their teachers, children and their peers), and (c) management strategies. Internal consistency for the three items was high (α = .92). All three Classroom Observation subscales of the ELLCO have been shown to correlate with another measure of a similar construct, the Classroom Profile's (Abbott-Shim & Sibley, 1998) Learning Environment subscale (r's = .41, .31 and .44, respectively). Items were scored on a 1–5 rating scale, with 1 indicating 'deficient' and 5 indicating 'exemplary.' Possible summed scores on the three items from the ELLCO ranged from 0 to 15, teachers in our sample had a mean score of 3.39 (SD = 1.01, range of 4–15).

Finally, two additional scales from the ELLCO were utilized, but we did not necessarily expect these to relate to the SABR because they assess book reading from a different theoretical perspective that emphasizes access to books around the room and alignment of shared-reading sessions with the current theme/topic of study. First, the Book Use scale from the ELLCOs Literacy Environment Checklist was utilized to provide information relevant to the availability of books in various classroom areas. Internal consistency for this subscale for this sample of teachers was reasonable (α = .70). Subscale items were either scored as: (a) 1/0 (i.e., Yes/No), or (b) on a 1–2 rating scale, with 0 indicating no books available for use and 2 indicating four or more books available for use. Possible scores on the Book Use scale ranged from 0 to 9. Teachers in our sample had a mean score of 3.02 (SD = 1.99, range of 0–9) on this subscale. One additional ELLCO scale, Approaches to Book Reading, was utilized as a measure of teachers' intentional approach to reading such that read alouds are well-coordinated with learning goals/themes and integrates book reading in classroom routines. This item was scored on a 1–5 rating scale, with 1 indicating 'deficient' and 5 indicating 'exemplary.' Teachers' in this sample had a mean score of 3.40 (SD = 0.67, range of 2–5).

ELLCO observations were completed in September/October and April/during approximately 45 min classroom observations conducted by trained research assistants. For the purposes of this study, the scores from the ELLCO items were averaged across the fall and spring time points to provide a single score.

4.6. Methods of statistical inquiry

In order to assess reliability of the SABR, we estimated the internal consistency of each of the theoretical constructs using Cronbach's alpha (1951), as well as the correlations among factors. We also examined delayed alternate-form reliability by examining correlations between teachers' SABR scores across readings of two different texts. Finally, we calculated inter-rater reliability by determining intraclass correlation coefficients (ICCs) for each construct. To assess validity, discriminant validity of the factors was explored using Mplus (Muthén & Muthén, 1998–2010), with maximum likelihood estimation. Scores obtained from the SABR

Table 2
Descriptive statistics for each SABR construct.

SABR construct	*I Stink!*			*Rumble in the Jungle*			
	M	*SD*	Range	*M*	*SD*	Range	Cronbach's alpha
Language development	45.25	30.63	1–150	27.83	30.29	0–197	.83
Abstract thinking	10.88	10.01	0–43	8.69	8.06	0–80	.64
Elaborations	6.93	6.74	0–33	7.20	8.32	0–45	.73
Print/phonological skills	19.43	16.78	1–89	14.24	14.74	0–43	.50
Session climate	10.28	10.13	0–43	7.56	9.02	0–60	.72

$n = 105$.

are count data, thus it was appropriate to utilize a Poisson distribution in this portion of our analyses. Use of count variables poses limitations for modeling, as means, variances, and covariances are not sufficient statistics for model estimation. Therefore, we were not able to obtain chi-square and other related test statistics. We instead utilized measures of comparative model fit [i.e. Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC)]. Additionally, to calculate standardized coefficients, we correlated ability scores obtained with theta scores as a proxy. Finally, criterion validity was investigated through examining correlations between SABR scores and related measures designed to assess similar conceptual tasks.

5. Results

5.1. Descriptive and reliability data

Descriptive statistics for SABR construct totals (i.e., Language Development, Abstract Thinking, Elaborations, Print/Phonological Skills, and Session Climate) for the 105 teachers' reading of *Rumble in the Jungle* are presented in Table 2. Results demonstrate considerable variability in mean scores across the constructs. Language Development had the highest totals ($M = 27.83$), suggesting that teachers most frequently made comments that we characterized as promoting language development, mostly including labeling nouns and describing nouns. The Print/Phonological Skills construct had the next highest comment totals ($M = 14.24$). By comparison, fewer teacher comments were coded as Abstract Thinking, Session Climate, or Elaborations ($M = 8.69$, 7.56, and 7.20, respectively). Further, all variables had a positive skew signifying that in the probability density functions the bulk of values resided to the left of the means, indicating that a few teachers had high codable behavior totals whereas the majority of teachers had fewer codable behaviors. In terms of session length, three teachers went slightly over the 30-min time limit of SABR coding when reading *Rumble in the Jungle*, with session durations of 31, 32 and 33 min; of these longer sessions all teachers reached the last page in the book within the 30-min coding limit. For the reading of *I Stink!*, which will be discussed subsequently, all teachers finished the reading session within the 30-min coding limit.

In order to determine SABR's internal consistency, we computed Cronbach's (1951) alpha coefficients for the five construct totals for the 105 teachers' shared readings of the text, *Rumble in the Jungle* (see Table 2). Nunnally and Bernstein (1994) provided the following guidelines regarding the acceptability of alpha reliability coefficients: >.90 – acceptable for clinical decisions, >.80 – acceptable for research practice. Although not excellent, reasonable estimates for four of the constructs were observed, ranging from .64 to .83. However, the coefficient for one construct ($\alpha = .50$), estimated for the Print/Phonological Skills construct, suggests that these items do not reflect a single construct.

Pearson product moment correlations were calculated to examine inter-relations among the five total scores on the SABR. We expected the strongest correlations to be found among the four instructionally focused constructs (i.e., Language Development, Abstract Thinking, Elaborations, and Print/Phonological Skills), and weaker correlations for these instructional constructs as related to Session Climate, as the latter addresses qualitatively different dimensions of the shared-reading session. In general, the factor scores for the four constructs with an instructional focus were moderately inter-correlated, ranging from .31 between Print/Phonological Skills and Language Development to .70 between Language Development and Abstract Thinking. Session Climate correlations were slightly weaker in magnitude, ranging from .22 with Language Development to .64 with Print/Phonological Skills (see Table 3).

5.2. Delayed alternate-form reliability

To investigate whether scores on the SABR, obtained at two different time points and two different texts, were correlated, we examined relations between the SABR construct scores from two texts, *Rumble in the Jungle* and *I Stink!* Although we expected teachers to read both texts with generally similar behavior patterns, we also expected teacher behaviors to vary somewhat because the two texts, although somewhat similar as previously established, were not identical. Table 4 provides correlations between the five construct factor scores for teachers' readings of the two texts. SABR factor scores from *Rumble in the Jungle* were consistently and moderately correlated with factor scores from *I Stink!* These moderate correlations suggest that the SABR is a measurement tool that detects some similarities in teachers' reading behaviors across two different texts sharing similar properties. However, the fact that

Table 3
SABR construct factor score correlations.

	1	2	3	4
1. Language development	–			
2. Abstract thinking	.70**			
3. Elaborations	.65**	.63**		
4. Print/phonological skills	.31**	.47**	.42**	
5. Session climate	.22*	.30**	.27**	.64**

$n = 105$.
* $p < .05$, two tailed.
** $p < .01$, two tailed.

Table 4
SABR construct correlations for readings of *Rumble in the Jungle* and *I Stink!*.

SABR construct	Correlations between RJ[a] and IS[b] factor scores
Language development	.43**
Abstract thinking	.44**
Elaborations	.40**
Print/phonological skills	.65**
Session climate	.45**

$n = 76$.
[a] *Rumble in the Jungle*.
[b] *I Stink!*
** $p < .01$, two tailed.

Table 5
SABR items and reliability statistics.

SABR items	*M*	Variance	Item-total correlation	AIID[a]
Language development (α = .83)				
Notice, label or describe story action	2.86	4.00	.71	.81
Ask for or provide noun label	11.85	13.31	.87	.77
Ask for or provide noun description	7.43	8.64	.81	.73
Ask for our provide word definition	0.69	1.94	.59	.85
Expand/extend child utterance	5.01	6.34	.80	.75
Abstract thinking (α = .64)				
Model/ask to compare and contrast	1.3	1.70	.44	.60
Model/ask for judgments/evaluations/inferences	4.37	4.37	.55	.53
Model/ask for hypotheses or predictions	0.70	1.23	.31	.66
Model/ask for reasoning/analysis/explanation	2.31	3.27	.62	.39
Print/phonological skills (α = .50)				
Discuss book or print conventions	2.42	3.03	.57	.35
Discuss letter sounds in the text	0.88	2.08	.58	.41
Discuss letters/words	10.58	11.00	.69	.57
Discuss sounds of words	0.36	0.93	.55	.50
Elaborations (α = .73)				
Encourage children to make text-life connection	2.79	3.35	.65	.63
Encourage children to dramatize	1.52	2.19	.58	.66
Ask for or provide a word elaboration	0.30	0.92	.56	.72
Follow child's spontaneous initiation	2.07	3.31	.62	.64
Discuss character emotions	0.51	0.95	.46	.73
Session climate (α = .72)				
Encourage children to touch book	1.30	2.95	.67	.53
Provide positive feedback	5.27	5.43	.65	.72
Model respect	0.99	2.09	.61	.68

[a] Alpha if item deleted index.

these correlations were not strong may be evidence of the variability that occurs in teacher behavior according to the book used.

5.3. Inter-rater reliability

The inter-rater reliability of the SABR was assessed through double-coding a randomly selected 10% (n = 11) of videotaped shared-reading sessions using the book, *Rumble in the Jungle*. Also, interclass correlation coefficients (ICC) were calculated for each of the five identified constructs. ICCs are used to measure inter-rater reliability between two or more raters with continuous data and can be interpreted similar to Kappa values. Therefore, ICCs will approach one when there is no variance between scores given by different raters. We utilized guidelines that characterize ICCs over .75 as excellent, .40 to .75 as fair to good, and below .40 as poor (Fleiss, 1981). According to the guidelines set out by Shrout and Fleiss (1979), the appropriate ICC model for these analyses is a two-way random effects model, as all items were considered a random factor and both coders were randomly selected from among all possible reliable coders, making this ICC generalizable to all possible coders. Absolute agreement was used as the criterion for all computations. Absolute agreement describes whether raters assign the same absolute score and should be used when systematic variability due to raters is relevant. Finally, single measure reliability was interpreted because individual ratings constitute the unit of analysis and further research will use the ratings of a single coder.

Using these guidelines, the ICCs found for the five SABR constructs were as follows: Language Development (.94), Abstract Thinking (.96), Elaborations (.73), Print/Phonological Skills (.95), and Session Climate (.71). This level of agreement suggests that SABR scores are reliable across different coders, and are excellent or near-excellent (Shrout & Fleiss, 1979).

5.4. Factor structure of the SABR

Reliability statistics of the 21 SABR items were examined and evaluated for retention (see Table 5). An item was deemed as acceptable for inclusion if it met the following criteria: (a) a corrected item-total correlation estimate $\geq$.40, (b) Cronbach's alpha if item deleted (AIID) index lower than the scale reliability, and (c) content distinguishable from other items. According to these guidelines, 19 of the items were deemed acceptable and three items were in question. Specifically, two of these items had AIID indexes that were slightly higher than the scale reliability. However, as the corrected item-total correlation estimates for these two items (i.e., 'Ask for or provide word definition' and 'Discuss letters or words including counting words') were >.40 and the content of the items were distinguishable from other items; the items were not removed from the constructs. Finally, the item 'Model/ask for hypotheses/predictions' had an item-total correlation of <.40. However, this item's AIID index was only slightly higher than scale reliability and the content of the item was distinguishable from other items resulting in the item being retained.

Confirmatory factor analyses (CFA) were conducted with the 105 teacher videos according to the following steps. A CFA with a hypothesized five-factor model for the SABR was tested as a first step. Our goals in using CFAs in this step of the analyses were twofold. First, CFAs allowed us to examine the relationship of our specified models to observed data. Second, CFAs provided evidence that our specified model indicated a better fit when compared to an alternative model. For our purposes, we utilized fit indices to compare alternative structures of the same model to each other. Thus, the five-factor model was tested, along with a unidimensional model of book reading quality, as well as a final four-factor model. This final four-factor model did not include the Print/Phonological Skills construct, which was a part of the originally hypothesized five-factor model, since this construct demonstrated less robust reliability based on Cronbach's alpha. As count data were used in our analyses, two model fit indices were available for use as measures of model performance: (a) AIC and (b) BIC. The AIC is a log likelihood measure of fit which is used to compare competing models, in which smaller AICs indicate better fit (Kline, 2005). The BIC is a closely related measure of comparative model fit which imposes a stronger penalty for additional parameters than the AIC (Kline, 2005).

Results demonstrated that the four-factor model is the best fit for the data (AIC = 6680.09, BIC = 6786.25) as compared to the five-factor (AIC = 8223.28, BIC = 8361.28) and unidimensional

Table 6
SABR items and factor loadings for four-factor model.

SABR items	Raw estimates	Proxy structure coefficients
Language development		
Notice, label or describe story action	1.25	.54**
Ask for or provide noun label	1.53	.80**
Ask for or provide noun description	1.34	.70**
Ask for our provide word definition	2.17	.40**
Expand/extend child utterance	1.66	.76**
Abstract thinking		
Model/ask to compare and contrast	0.91	.52**
Model/ask for judgments/evaluations/inferences	0.89	.74**
Model/ask for hypotheses or predictions	0.78	.32**
Model/ask for reasoning/analysis/explanation	1.37	.76**
Elaborations		
Ask for or provide a word elaboration	1.96	.44**
Encourage children to make text-life connection	1.23	.70**
Encourage children to dramatize	1.04	.53**
Follow child's spontaneous initiation	1.74	.70**
Discuss character emotions	1.18	.47**
Session climate		
Encourage children to touch book	2.24	.69**
Provide positive feedback	1.02	.84**
Model respect	1.66	.60**

** $p < .01$, two tailed.

model (AIC = 9561.40, BIC = 9672.87). Therefore, the unidimensional model resulted in the poorest fit for the data. Standardized factor loadings for each item in the four-factor model are reported in Table 6. All items yielded statistically significant proxy structure coefficients ranging between .32 and .84, indicating moderate to strong correlations between items and constructs.

5.5. Criterion validity

Typically, criterion validity of a tool is determined by comparing scores across measures of the presumably same construct. Nonetheless, for our purposes, there are few measures available that adequately capture the construct of interest, particularly in a comprehensive manner. Therefore, validity of the SABR was assessed by investigating the relation between SABR scores and global measures of classroom quality that are conceptually similar. As anticipated, the factor scores from four SABR constructs with an instructional focus (Language Development, Abstract Thinking, Elaborations, and Print/Phonological Skills) correlated with the CLASS Instructional Support composite score; see Table 7 for correlations. SABR instructional constructs were consistently and moderately related to CLASS scores, thus providing evidence that these four SABR constructs are measuring skills similar to those measured by comparable measures that assess classroom quality more globally. Second, and as expected, the factor score from SABRs Session Climate construct correlated with the ELLCO Classroom Climate scale, $r = .23$, $p < .05$. Finally, the correlations between SABR constructs and the other ELLCO book reading scales were investigated, and no significant relations were observed.

Overall, the correlations between SABR scores and the relevant global measures of classroom quality were modest, albeit statistically significant (ranging from .24 to .46 for constructs hypothesized to address similar domains). When establishing the validity of a new tool against existing tools, moderate correlations can be expected as new and existing tools do not measure the identical constructs of existing tools, particularly those used in this study, which capture more global aspects of classroom practices. Further, the moderate correlations may indicate that the SABR is in fact capturing similar yet unique teacher behaviors and therefore established the utility of the tool.

Note that all analyses were conducted on the original data as well as when outliers were normalized (i.e., scores not within the ±3 interquartile ranges). We have opted to present the results from the original data, as the latter did not alter our findings. Full results using the normalized data are available from the first author upon request.

6. Discussion

Shared-reading sessions employed within the classroom setting, whether in whole-group or smaller-group contexts, can be an effective method for enhancing children's language and literacy learning opportunities and for promoting the overall quality of children's instructional experiences (for reviews, see Bus et al., 1995; Karweit & Wasik, 1996; Mol et al., 2009; National Early Literacy Panel, 2008). Thus, increasing the quality of shared-reading practices is a common goal of PD provided to early childhood educators (e.g., Dickinson & Caswell, 2007; Jackson et al., 2007). Given the increasing emphasis being placed upon quality shared-reading practices, it is imperative to develop well-designed tools, such as the SABR, that are able to capture the quality of these practices in the early childhood classroom. Therefore, the purpose of this study was to establish the psychometric qualities of the SABR, a tool that is available at no cost and is designed to address these gaps in our methods for examining shared-reading sessions. Within this discussion, we provide an overview of our major findings as well as a discussion of the potential uses of the tool.

6.1. Psychometric qualities of the SABR

In this research, we assessed several psychometric qualities of the SABR: reliability of the constructs, delayed alternate-form reliability, inter-rater reliability, factor structure of the tool, and construct validity. Several findings are particularly compelling. First, the results support the reliability of four of the five construct scores, as these constructs had acceptable internal consistency. On the other hand, we do note that reliability for the constructs was not excellent and particularly there was lower reliability for one construct, Print/Phonological Skills. This suggests that the items in this construct may not be closely related as a group, at least in this sample which includes direct manipulation of about two thirds of the teachers' use of print-referencing behaviors, whereas other teachers were not trained to discuss print-related features of

Table 7
Correlations between SABR constructs and CLASS and ELLCO scores.

SABR construct	CLASS instructional support	ELLCO classroom climate	ELLCO reading approaches	ELLCO environment: book use
Language development	.38**	−.01	.07	−.01
Abstract thinking	.46**	−.08	−.04	.07
Elaborations	.28*	.03	−.01	.18
Print/phonological skills	.39**	−.12	−.09	−.07
Session climate	−.02	.24*	.04	.04

$n = 76$.
* $p < .05$, two tailed.
** $p < .01$, two tailed.

the text depending on their assignment to conditions of the larger studies. Indeed, the average frequency of print/phonological references was much higher than that observed in other preschool book-reading samples in which teachers are not trained to reference print (e.g., Hindman et al., 2008). Despite the overall lower internal consistency, we believe that the items within this construct provide useful information regarding adult shared-reading behaviors in the early childhood classroom that previous research has identified as improving young children's print knowledge (Justice & Ezell, 2002; Justice et al., 2009).

Further, our findings established the utility of the Print/Phonological skills construct given that it was significantly and highly correlated across teachers' scores when reading two separate texts. This correlation indicates that SABR coding resulted in stable estimates of ability for this construct on the two texts ($r = .65$), perhaps indicating that teachers, whether trained to reference print or not, did so fairly consistently across both book readings. This type of evidence provides support for the construct's treatment utility. A measure could easily have treatment utility without internal consistency and, further, high internal consistency may not necessarily be expected (Hayes, Nelson, & Jarrett, 1987). However, further measurement work, including studies investigating possible additional items within this construct and studies linking this construct to child outcomes will be necessary and important in further examining the Print/Phonological Skills construct.

Second, our assessment of delayed alternate-form reliability demonstrated that the SABR construct scores were positively correlated when measured at two different time points with two different texts. Because there was no substantial change in the SABR factor structures/constructs measured on the two occasions, we concluded that the SABR could be considered a reliable tool for assessing reading quality of different texts. As we anticipate the SABR being used with various texts and in varying settings, it is important to have confidence in the tool's reliability across contexts and time. It is interesting to note that teachers' behaviors during book reading were moderately correlated over time even when two separate texts were used. Had we seen non-significant correlations between teacher behaviors as measured by the SABR across texts and time, we may have had cause for concern regarding the reliability of constructs. As this was not the case, we can assign a level of confidence to the reliability of the factors themselves and begin to consider reasons we may see variability among teacher scores across texts and times. It is possible that this stability can be attributed to the similarity between texts used in these analyses, but further research is needed to untangle factors related to consistency (or, perhaps, instability) in teacher reading behaviors. On the other hand, although we attempted to select similar texts the more moderate correlations may be attributable to the natural differences between texts given that these were not texts in a series by the same author or featuring the same characters. Text type is known to be an important factor related to variations in teacher behaviors, as research has shown that extratextual talk is influenced by text type (Price, van Kleeck, & Huberty, 2009; Smolkin, Donovan, & McTigue, 2008; Zucker, Justice, & Piasta, 2009). Therefore, future research should investigate the effect book characteristics may have on teachers' SABR scores during shared-reading sessions of more than two books and different genres of texts.

Additionally, we acknowledge that a very stringent test of alternate form would have teachers read two books in a series by the same author and with the same format (e.g., two books about Curious George) and within a few days apart. Our approach was less stringent in an effort to achieve greater ecological validity – we used similar but certainly not identically formatted books at two different time points. This reflects the way in which shared reading sessions are typically used in preschool classrooms – to address changing themes/units of study. We were interested in first looking to see if there was evidence of consistency across this more ecologically sensitive pair of texts before moving into a more controlled situation. Future research on the SABR should more stringently assess reliability of the tool across true alternative forms.

We also investigated the reliability of the SABR through establishing inter-rater reliability. Agreement across users was found, indicating that the tool could be reliably used across different trained coders. The fact that coders were found to be highly reliable when using the SABR is especially notable, given that similar, less complex measures exhibit questionable reliability (e.g., OMLIT-RAP; Goodson et al., 2006). These findings are important because tools that are proven to be reliable can be useful for both researchers and practitioners interested in characterizing teacher behaviors during shared-reading sessions.

Results also indicated that shared-reading quality cannot be conceptualized with this measure as a total or sum score given that the five SABR constructs do not fit the unidimensional quality model. These results are interesting in that they suggest that the different SABR constructs capture a distinguishable set of key teacher reading behaviors. From a theoretical perspective, these findings are convergent with other work showing that adults' literacy behaviors can be differentiated on the basis of how they appear to affect their children's longitudinal literacy abilities (e.g., shared reading is related children's motivation to read, but explicit teaching related to children's decoding skill; Sénéchal, 2006). Thus, an accurate view of the quality of shared-reading sessions, as measured with the SABR, takes into account the variability of adult behaviors across separate constructs, as opposed to one overall measure of quality.

Finally, our analyses indicated that the SABR scores were somewhat related to other measures designed to assess similar aspects of classroom quality. Interestingly, these findings suggest that there are positive associations between what teachers do during book reading and the larger classroom environment. Specifically, although correlations were not high, the amount of instructional support provided by teachers in the classroom, as measured by the CLASS-Pre-K (Pianta et al., 2005), was related to the amount of instructional support provided during shared-reading sessions as measured by the SABR. Likewise, results indicated that measures of a supportive, engaging general classroom climate (as measured by the ELLCO Classroom Climate composite; Smith & Dickinson, 2002) were related to measures of a supportive and engaging shared-reading session. It should be noted that our measure of book reading was collected at a different time of the day than our measures of classroom quality and the existence of these correlations is similar to what is seen when classroom quality is measured at different times as well (Curby, Grimm, & Pianta, 2010).

Although this is an interesting finding, it is not necessarily surprising, given that previous research has shown considerable coherence in teachers' goals and practices (Stipek & Byler, 1997, 2004; Vartuli, 1999). Therefore, identifying teacher behavior patterns during shared reading may provide insight into similar teacher behavior patterns in a more general classroom context. Nonetheless, gathering information on patterns of particular behaviors may be imperative given that children benefit from specific teacher behaviors (Dickinson & Smith, 1994; Hamre & Pianta, 2001; Hindman et al., 2008). For instance, there is considerable evidence that suggests that children benefit from specific teacher behaviors such as frequent references to print and phonological awareness during reading (e.g., Justice & Ezell, 2002; Ukrainetz et al., 2000).

Also of importance, the SABR was not significantly related to the ELLCO scales that assess book reading and book use from a different theoretical perspective. The ELLCO captures information on teachers' approaches to shared reading by emphasizing the

importance of intentionally linking the book to the current theme/goals of study and incorporating book reading in the daily routines. The SABR was designed for use with any book reading session, regardless of whether it is related to the current theme to ensure broader research and practice applications, so the absence of relations across these measures is not surprising. Additionally, there were no significant correlations between the SABR and the ELLCOs measure of Book Use that quantifies the accessibility of books throughout the classroom environment. In this sample, in which teachers were provided with 30 books, it appears that the ELLCOs measure of structure or access to books does not relate to the qualities of teacher's book reading behaviors. These findings are theoretically interesting, in that they suggest that the ELLCO, a commonly used measure of early childhood classroom quality, conceptualizes book reading differently than the SABR. Thus, these findings may indicate that the SABR is a valuable contribution as a standardized tool that measures qualitatively different aspects of shared reading, many of which are shown to have long-term relations to children's language and literacy skills through grades 1 and 4 (Dickinson & Porche, 2011; Zucker et al., 2011).

6.2. Potential uses

In this study, we have presented a tool for documenting the quality of classroom-based shared reading that is standardized, comprehensive, appropriate for the early childhood classroom, and psychometrically sound. A tool with these characteristics has important potential uses for both research and practice, as we discuss here.

6.2.1. Research

An extensive body of research has addressed the importance of providing children with shared-reading experiences in the classroom environment (Bus et al., 1995; Mol et al., 2009; National Early Literacy Panel, 2008). Equally importantly, intervention research has shown that educators' use of specific techniques, such as elaborating on story events or word meanings or referencing print, has benefits to children's development of important skills, such as vocabulary and print knowledge, respectively (Hargrave & Sénéchal, 2000; Justice & Ezell, 2002; Penno et al., 2002). In order to accurately compare results across studies, one standardized tool that addresses the quality of shared reading would be beneficial to the research community. The issues involved with the absence of such a tool have been illuminated by national reports and meta-analyses investigating shared-reading quality. For example, the report of the National Early Literacy Panel (2008) showed that it is difficult to make comparisons among studies of shared-reading practices. Further, the report concluded that this inability to compare results across studies was detrimental to understanding effective features of shared-reading interventions, as there exists a great need to accurately examine and compare types of shared-reading interventions and how they have been delivered. Importantly, the SABR addresses this gap by providing a standardized, freely accessible, and psychometrically sound tool that could serve to examine and compare shared-reading interventions across studies. Additionally, Mol, Bus, De Jong, and Smeets' (2008) meta-analysis of dialogic reading studies revealed that a majority of the studies included in the review lacked accurate documentation of what actually happened in study conditions. This lack of documentation made it challenging to identify the true origin of intervention effects. Thus, a reliable and valid tool such as the SABR could serve to remedy issues such as these in future studies that require documentation of shared-reading quality across study conditions.

Also important to note is that the SABRs coding and scoring designs provide unique benefits for the research community above and beyond currently available tools. For instance, the SABR is designed to provide both frequency counts of total extratextual events during reading as well as individual events that could, if one wanted, be analyzed sequentially to examine how events unfold throughout the reading session or on which page(s) of the text events occurred. Therefore, the level of coding depth of this measure is a benefit over existing tools. Additionally, there is no transcription needed to use the SABR, which allows for more efficient, less time intensive coding procedures. It is possible that in using this more efficient measure of shared reading, we could see a shift in the research to observing multiple shared-reading sessions. This is an important step for future research in classrooms because we know that adult reading behaviors vary across different types of texts (Price et al., 2009) and is likely to vary depending on the attention and engagement of students for that given day and that text.

6.2.2. Practice

The SABR also holds potential benefits for practitioners. The SABR allows for an examination of adults' discrete behaviors during shared reading across several constructs (i.e., Language Development, Abstract Thinking, Elaborations, Print/Phonological Skills, and Session Climate). In contrast, many existing measures of shared-reading quality simply categorize adult behaviors during shared reading as a global "style." There are some data indicating that specific adult reading behaviors, which are measured with more micro-level variables, serve as stronger predictors of children's later language and literacy outcomes than do more global aspects of reading styles (Dickinson & Smith, 1994; Wasik et al., 2006). Thus, the SABR allows for consideration of discrete adult reading behaviors that may benefit particular child outcomes, thereby providing educators with evidence that directly informs instruction. For example, a teacher and/or an instructional coach could analyze some or all of a shared reading session using the SABR. It may not be necessary or feasible (given school resources) to analyze an entire reading session, but sections of the reading session could by systematically sampled and played back for coding and immediate or delayed discussion. This could lead to specific insights, such as a teacher becoming aware that their shared-reading sessions include relatively few comments encouraging abstract thinking, which they can practice incorporating in future shared-reading sessions.

The SABR could be particularly useful for literacy coaches or other professionals as a type of formative assessment that could support PD and that would be fairly low cost, in terms of both financial resources and the time needed for assessment. Increasing evidence suggests that various models of coaching or mentoring can support early childhood educators in improving the quality of interactive shared reading (see Zucker & Landry, 2010). For example, a literacy coach could use the SABR to evaluate videotaped shared-reading sessions to gain a clearer understanding of the types of teacher behaviors occurring within this context. Similarly, groups of teachers could be trained to work together to evaluate and critique their own videotaped instruction during shared-reading sessions. Further, teachers and coaches could use the SABR to compare teacher behaviors across different types of books (e.g., narrative or informational). As research has shown that children may benefit from exposure to shared reading of a variety of informational texts (Duke & Kays, 1998; Varelas & Pappas, 2006), gathering information regarding the quality of those experiences may be important. Given the potential importance of shared reading for supporting children's language and literacy development (e.g., National Early Literacy Panel, 2008), the development of a standardized coding system for evaluating shared reading, such as the SABR, could help assessment of classroom shared reading gain a foothold in PD.

6.3. Limitations

This study has several limitations that warrant mention. The first limitation is the constrained sample with respect to participants and materials. Regarding the former, although similar research studies have used comparable sample sizes (e.g., Munis, Greenfield, Henderson, & George, 2007; Sakai, Whitebook, Wishard, & Howes, 2003), future research should be conducted using a larger sample size and more book-reading sessions to further investigate factor structure, which will particularly helpful in establishing the internal consistency of SABR constructs. Thus, this study represents an important step to providing preliminary evidence for the reliability and validity of the SABR, however further analyses are necessary to establish the tool's full potential. Additionally, because our sample's demographics were relatively homogeneous (i.e., 95% female, 75% White, and fairly highly educated), findings may not be generalizable to more diverse populations. Future research should examine the use of the SABR in more diverse linguistic and cultural circumstances. For instance, investigations of shared book reading behaviors with diverse language samples in which book reading occurs in dual-language classrooms is an important avenue for future research. Additionally, research that investigates the extent to which teacher education contributes to shared book reading quality warrants investigation. In terms of materials used in this sample, the fact that our analyses are limited to two texts presents a limitation. The nature of shared-reading interactions is unique from other classroom transactions in that it is influenced not only by the adult and children, but also by the demands of the text itself (e.g., Piasta et al., 2010; Price et al., 2009; Smolkin, Yaden, Brown, & Hofius, 1992; van Kleeck, 2003; Zucker et al., 2010). For instance, an important area for future research would involve investigating the factor structure of the SABR using more sophisticated texts with a more complex plot or comparing SABR coded reading sessions using highly similar text forms (e.g., same author or series of text) in order to further validate the tool's use across a variety of narrative and expository text structures.

A second limitation of this work is that the SABR as presently conceived only addresses teachers' reading behaviors using interval coding. In future work, we will explore how rating scales can be included with the SABR as complementary tools for assessing quality of teacher's responsivity. It may also be important to capture children's behaviors to accurately reflect the social/affective qualities of classroom-based shared-reading experiences. Much of the work focusing on affective qualities of shared reading has been done in the context of parent–child interactions and has taken into account adult reactions to children's behaviors in order to accurately capture social-emotional qualities (e.g., responsiveness, affect) of shared-reading sessions (e.g., Gest et al., 2004; Landry et al., 2011; Sonnenschein & Munsterman, 2002). Although it may be a more challenging endeavor to accurately measure children's contributions to shared-reading during large-group reading sessions (i.e., not dyadic interactions like parent–child reading), it is an essential area for future research, as it may capture a more complete view of the classroom shared-reading experience and bidirectional influences between the teacher and child contributions that shape the quality of instruction. Further it may be important to capture other factors related to the setting of the shared-reading experience (e.g., class size, presence of additional adults, seating arrangements, time of day) to explore the relationship between contextual factors and shared-reading quality. The inclusion of this information in future coding will allow us to examine how book reading quality may vary across different contextual arrangements or time of day, as observed in other work with the CLASS measure (Curby et al., 2010). To summarize these important limitations, by nature of design, the SABR is a tool that is largely focused on quantifying instructional supports with interval coding and captures emotional support as accurately as possible with this type of coding and when considering only teacher behaviors.

Additionally, it is possible that the means and standard deviations of some codable behaviors were influenced by the PD teachers received as a result of participating in the larger study. Therefore, it is unclear whether the means and standard deviations presented here are generalizable to a larger pool of teachers. Future work examining SABR utility with teachers who have received little or no PD on shared reading will be informative.

A fourth limitation is that coding for this study was conducted via videotapes. Ideally, a coding scheme such as the SABR could be scored online with live classroom observations as reading sessions unfold. In the present study, we did not examine potential differences in SABR scores as a function of coding online (in a classroom while the teacher is reading) versus offline (in a laboratory from video). However, we believe that live scoring is possible and warrants investigation, based on previous studies involving very complex observational tools reliably implemented in classroom settings (e.g., La Paro, Pianta, & Stuhlman, 2004). With appropriate training it is very possible for coders to learn to reliably document very complex patterns as they unfold over time. For instance, Justice, Bowles, Phence and Gosse (2010) compared scoring accuracy when observers code children's narratives live versus offline scoring and found that even the very refined features of spoken narratives (e.g., use of certain clause structures) can be reliably coded live. Nonetheless, we recognize the importance of empirically documenting the accuracy of SABR as coded live versus offline and identify this as an important area for future research.

7. Conclusion

In sum, this work presents preliminary evidence that the SABR is a reliable and valid tool that might provide researchers and practitioners with an agreed-upon and freely available tool that can be used to document the types of shared-reading experiences to which children are exposed to in their early childhood classrooms. Further, we have established the SABR as a tool that is standardized, comprehensive, and geared toward early childhood classrooms. Given these qualities, researchers might use the SABR to accurately compare results of shared-reading interventions across studies and conduct more nuanced assessments of shared-reading quality. Practically, SABR results could provide information on specific teacher behaviors during shared-book reading that might be used in developing effective professional development.

Appendix A. SABR: Systematic Assessment of Book Reading

	CONSTRUCTS	CODING CATEGORIES INTERVALS→	:15	:30	:45	1:00	1:15	1:30	1:45	2:00	2:15	2:30	2:45	3:00	3:15	3:30	3:45	4:00	4:15	4:30	4:45	5:00	5:15	5:30	5:45	6:00	6:15	6:30	6:45	7:00	7:15	7:30	Total	Sum
I. Instructional Support	Language Development	1a. [L][a] Notice, label, or describe **story actions** (i.e., verbs); perceptually present	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		Lang Dev. Tot
		1b. [L] Ask for or provide **noun label, locate, or notice** (no modifier, but can include preposition; includes rote counting)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
		1c. [L] Ask for or provide noun **description/characteristics** (any modifier, including possession; selective focus on parts of noun)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
		1d. [I] Ask for or provide a word **definition** ("this means"…; "this is" + essential quality/synonym/category; example/non-example)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
		1e. **Expands/extends** C's utterance (includes change in grammatical form, adding an idea, or tag Q added to C's utterance)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
	Abstract Thinking	2a. [I] Model or ask to **compare and contrast** (show differences and likenesses)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		Abstract Thinking Tot
		2b. [I] Model or ask for **judgments, evaluations, inferences** or **character's point of view**	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
		2c. [I] Model or ask for hypotheses or **predictions** about future story events, or revisit/confirm prediction	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
		2d. [I] Model or ask for **reasoning, analysis,** or **explanation** (e.g., conditions, cause, effect, draw conclusions, explain how/why)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
	Elaborations	3a. **Text-to-life connection** (link to child or adult's personal experiences or to other texts)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		Elaborations Tot
		3b. Encourage C to **dramatize/imitate/pretend** (includes pretend talk to characters)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
		3c. Ask for or provide a word **elaboration** (rich discussion, contextualize, dramatize for word meaning)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
		3d. **Follows C spontaneous initiation** with contingent verbal response that **continues C's topic** (T must do more than repeat C's utterance or offer a vague acknowledgement)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
		3e. **Emotion Modeling** using feeling words to discuss character emotions, emotion words in text, or own emotive responses	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
	Print/ Phonological Skills	4a. Discuss **book or print conventions** (***title, author, illustrator, cover, spine, read left to right, read + page***, *how to read*)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		Print/Phonological Tot
		4b. Discuss **letter sounds** in the text (includes single letter sounds, digraphs – *sh, ch, th, wh* – or letter pairs/blends – e.g., *sl, br,* etc.)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
		4c. Discuss **letters or words** including counting words (***letter, upper/lower-case, capital, ABC's, alphabet, word + print***)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
		4d. Discuss **sounds of words** including ***rhyme, syllables,*** beginning sounds, phonemes	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
		Page # →																																

	CONSTRUCTS	CODING CATEGORIES INTERVALS→	:15	:30	:45	1:00	1:15	1:30	1:45	2:00	2:15	2:30	2:45	3:00	3:15	3:30	3:45	4:00	4:15	4:30	4:45	5:00	5:15	5:30	5:45	6:00	6:15	6:30	6:45	7:00	7:15	7:30	Total	Sum
II. BR	Session Climate	5a. Children **touch book** (excludes C touching book without T's encouragement)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		Session Climate
		5b. **Positive feedback** (Do not code: *Yeah, Yep, Uh huh, Okay*; must include a positive/affirming word or phrase)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
		5c. **Models respect** (***please, thank you, you're welcome;*** *responds to C's signals* sensitively and promptly)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
		Page # →																																

SCORE FORM

Language Development (LD)

1a Describe Events. Pg1 _____ + Pg2 _____ + Pg3 _____ + Pg4_____ = _____ Sum Score 1a
1b Noun Label. Pg1 _____ + Pg2 _____ + Pg3 _____ + Pg4_____ = _____ Sum Score 1b
1c Describe Noun. Pg1 _____ + Pg2 _____ + Pg3 _____ + Pg4_____ = _____ Sum Score 1c
1d Word Definition. Pg1 _____ + Pg2 _____ + Pg3 _____ + Pg4_____ = _____ Sum Score 1d
1e Expand/extend. Pg1 _____ + Pg2 _____ + Pg3 _____ + Pg4_____ = _____ Sum Score 1e

_____ LD Total

Abstract Thinking (AT)

2a Compare/Contrast. Pg1 _____ + Pg2 _____ + Pg3 _____ + Pg4_____ = _____ Sum Score 2a
2b Judgment/Inference. Pg1 _____ + Pg2 _____ + Pg3 _____ + Pg4_____ = _____ Sum Score 2b
2c Prediction. Pg1 _____ + Pg2 _____ + Pg3 _____ + Pg4_____ = _____ Sum Score 2c
2d Reasoning/Explain. Pg1 _____ + Pg2 _____ + Pg3 _____ + Pg4_____ = _____ Sum Score 2d

_____ AT Total

Elaborations (EL)

3a Text-Life. Pg1 _____ + Pg2 _____ + Pg3 _____ + Pg4_____ = _____ Sum Score 3a
3b Dramatize/Pretend. Pg1 _____ + Pg2 _____ + Pg3 _____ + Pg4_____ = _____ Sum Score 3b
3c Word Elaboration. Pg1 _____ + Pg2 _____ + Pg3 _____ + Pg4_____ = _____ Sum Score 3c
3d Follow C's Initation. Pg1 _____ + Pg2 _____ + Pg3 _____ + Pg4_____ = _____ Sum Score 3d
3e Discuss Emotions. Pg1 _____ + Pg2 _____ + Pg3 _____ + Pg4_____ = _____ Sum Score 3e

_____ EL Total

Print & Phonological Skills (PP)

4a Book/Print Organiz. Pg1 _____ + Pg2 _____ + Pg3 _____ + Pg4_____ = _____ Sum Score 4a
4b Letter Sounds. Pg1 _____ + Pg2 _____ + Pg3 _____ + Pg4_____ = _____ Sum Score 4b
4c Letters/Words. Pg1 _____ + Pg2 _____ + Pg3 _____ + Pg4_____ = _____ Sum Score 4c
4d Phonology. Pg1 _____ + Pg2 _____ + Pg3 _____ + Pg4_____ = _____ Sum Score 4d

_____ PP Total

Session Climate (SC)

5a C Touch book. Pg1 _____ + Pg2 _____ + Pg3 _____ + Pg4_____ = _____ Sum Score 5a
5b Positive Feedback. Pg1 _____ + Pg2 _____ + Pg3 _____ + Pg4_____ = _____ Sum Score 5b
5c Model Respect. Pg1 _____ + Pg2 _____ + Pg3 _____ + Pg4_____ = _____ Sum Score 5

_____ SC Total

TIME

Duration: _____ min: _____ sec

OTHER VIDEO INFORMATION

For how much of the session was the book itself clearly in the camera view?
___ All/most ___ Some ___Little/None

For how much of the session were you able to clearly hear and parse the teacher's utterances?
___ All/most ___ Some ___Little/None

Note. The extended version of the SABR score sheet which includes intervals for book reading sessions longer than 7 minutes and 30 seconds can be found at clrc.ehe.osu.edu/resources/ assessments.

Appendix B. Example Teacher Utterances across SABR Codes

SABR items	Example teacher utterance
Language development	
Notice, label or describe story action	*They are going on a bear hunt.*
Ask for or provide noun label	*That's a watch.*
Ask for or provide noun description	*Show me the biggest tomato.*
Ask for our provide word definition	*What does "eject" mean?*
Expand/extend child utterance	*C: Dog. → T: That is a brown dog.*
Abstract thinking	
Model/ask to compare and contrast	*This word is small, but this word is long.*
Model/ask for judgments/evaluations/inferences	*Do you think he's embarrassed now?*
Model/ask for hypotheses or predictions	*What will happen if it gets wet?*
Model/ask for reasoning/analysis/explanation	*Why is everything missing?*
Elaborations	
Ask for or provide a word elaboration	*Doctors use this word.*
Encourage children to make text-life connection	*Your name starts with A too, Amy.*
Encourage children to dramatize	*Show me a ferocious and scary face.*
Follow child's spontaneous initiation	*C: I like cookies. → T: I like cookies too, my favorite cookies are chocolate chip.*
Discuss character emotions	*How does Mudge feel?*
Print/phonological skills	
Discuss book or print conventions	*This is the front of the book.*
Discuss letter sounds in the text	*Which letter on this page says/t/?*
Discuss letters/words	*Let's count how many words are in the title.*
Discuss sounds of words	*What rhymes with "wade?"*
Session climate	
Model respect	*C: I can't see. → T: Okay, I will turn the book around your way.*
Provide positive feedback	*Good job reading with me.*
Encourage children to touch book	*Please point to the giraffe.*

Appendix C. Supplementary data

Supplementary data associated with this article can be found, in the online version, at doi:10.1016/j.ecresq.2011.12.007.

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