Five Minutes a Day to Improve Comprehension Monitoring in Oral Language Contexts

An Exploratory Intervention Study With Prekindergartners From Low-Income Families

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Comprehension monitoring has received substantial attention as a reading comprehension strategy. However, comprehension monitoring is not limited to the reading context, but applies to the oral context for children's listening comprehension, which is a critical foundation for reading comprehension. Therefore, a systematic and explicit instructional routine for comprehension monitoring in oral language contexts was developed for prekindergartners from low-income families. Instruction was provided in small groups for approximately 5 min a day for 4 days a week for 8 weeks. Results showed that children who received comprehension monitoring instruction were better at identifying inconsistencies in short stories than those who received typical instruction with a medium effect size (*d* = .57). These results suggest comprehension monitoring is malleable and can be taught in the oral language context to prereaders from low socioeconomic backgrounds. Furthermore, the instructional routine reported in this study is flexible for individual, small group, or whole class settings, and likely can be easily delivered by educators such as teachers and paraeducators. **Key words:** *comprehension monitoring*, *intervention*, *listening comprehension*, *low SES*, *oral language*, *prekindergarten*

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ORAL LANGUAGE comprehension is an essential skill for daily interactions as well as reading comprehension (Adlof, Catts, & Little, 2006; Catts & Kamhi, 1999; Hoover & Gough, 1990; Joshi, Tao, Aaron, & Quiroz, 2012; Kendeou, van den Broek, White, & Lynch, 2009; Kim, 2015; Kim & Wagner, 2015; National Institute of Child Health and Human Development [NICHD], 2000; Oakhill, Cain, & Bryant, 2003; Storch & Whitehurst, 2002; Torgesen et al., 2001). Recent emerging evidence suggests that language comprehension at the discourse level, commonly referred to as listening comprehension, draws on a highly complex set of ability and knowledge, including working memory, attentional control, vocabulary,

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syntax, inference making, perspective taking, and comprehension monitoring (Florit, Roch, Altoè, & Levorato, 2009; Kendeou, Bohn-Gettler, White, & van den Broek, 2008; Kim, 2015, 2016; Kim & Phillips, 2014; Lepola, Lynch, Laakkonen, Silvén, & Niemi, 2012; Strasser & del Rio, 2014; Tompkins, Guo, & Justice, 2013).

Successful comprehension of texts, either oral or written, requires construction of a coherent mental model, which has been called the situation model (Graesser, Singer, & Trabasso, 1994; Kintsch, 1988; Perfetti & Stafura, 2014; van den Broek, Rapp, & Kendeou, 2005; van Dijk & Kintsch, 1983). Initially, the comprehender constructs elementary propositions based on linguistic input to establish local coherence (Kintsch, 1988). A proposition is the basic unit idea/thought. For instance, in the sentence "After having dinner, Jane went to sleep," there are two propositions—Jane had dinner, and Jane went to sleep. These initial and elementary propositions, then, have to be interconnected to establish global coherence. As some of these initial propositions are potentially incongruent with propositions in other parts of texts and/or against one's background knowledge, the comprehender has to evaluate and monitor his or her understanding of the text as the situation model is updated with incoming information (or propositions). Therefore, children who do not monitor or evaluate their own understanding are likely to construct incomplete or incorrect situation models, negatively impacting text comprehension.

Comprehension monitoring is the ability to reflect on and evaluate one's comprehension of text, either spoken or written (Baker, 1984a; Kinnunen, Vauras, & Niemi, 1998; Ruffman, 1999). It is typically measured by assessing children's ability to detect inconsistencies in stories (Baker, 1984a, 1984b; Cain, Oakhill, & Bryant, 2004; Kim, 2015, 2016). As an example, suppose that a child hears or reads the following short story: *Jane's favorite color is pink. She wears pink every day. She wears pink shirts. She wears pink shoes. Jane likes to wear everything blue!* Despite an inconsistency that is readily apparent to adults, many children do not readily detect inconsistencies like this (Baker, 1984a, 1984b; Beal, 1990; Cain et al., 2004; Kim, 2015, 2016; Kim & Phillips, 2014; Markman, 1977).

Comprehension monitoring has been widely recognized for its importance in reading comprehension (e.g., Block & Pressley, 2002; Griffin, Malone, & Kameenui, 1995; Pressley, Johnson, Symons, McGoldrick, & Kurita, 1989). Many students, particularly struggling readers, fail to understand what they read but are not aware of their failure (Gersten, Fuchs, Williams, & Baker, 2001). These children miss the purpose of reading (i.e., obtaining meaning from text). In contrast, good readers know when they fail to understand and are confused (Baker, 1984b; Baker & Brown, 1984; Oakhill, Hartt, & Smols, 2005). Therefore, comprehension monitoring has been widely promoted as a strategy to help students resolve confusion or comprehension failure in the context of reading (e.g., NICHD, 2000; RAND Reading Study Group, 2002). However, evidence also indicates that the ability to monitor one's comprehension is not exclusively for written texts, but applies to oral texts as well (Kim, 2015, 2016; Kim & Phillips, 2014; Markman, 1977). In prior research, individual differences in oral language comprehension monitoring were related to listening comprehension over and above other skills such as inhibitory control and theory of mind (Kim & Phillips, 2014), and working memory, vocabulary, and grammatical knowledge (Kim, 2015) for prekindergarten- and kindergarten-aged children. These findings suggest that comprehension monitoring instruction does not have to wait until children develop reading skills, and instead, should be considered in oral language contexts to promote children's listening comprehension, which, then, would influence reading comprehension.

Children's comprehension monitoring skill develops with age (Baker, 1984a; Markman & Gorin, 1981). However, there are large individual differences in comprehension monitoring (Block & Pressley, 2002; Kim, 2015,

2016; Kim & Phillips, 2014; Markman & Gorin, 1981), and those from disadvantaged backgrounds including families living in high poverty are at risk for comprehension monitoring failure (Kim & Phillips, 2014). This calls for systematic and explicit instruction on comprehension monitoring in oral language texts. A few previous studies have shown that comprehension monitoring can be taught successfully to children in middle grades using written texts, specifically, in the context of reading for children in grade three and above (Elliot-Faust & Pressley, 1986; Markman & Gorin, 1981). However, current research supports only limited understanding about how to promote and improve children's comprehension monitoring in oral language contexts, particularly for young children. In fact, to our knowledge, no studies have examined whether comprehension monitoring can be taught and improved in the oral language context for young prereaders. The present study reports such an effort to examine a potential effect of explicit instruction on comprehension monitoring in oral language contexts for prekindergartners from low socioeconomic family backgrounds.

We targeted children from low-socio-economic-status (SES) families because prior research has documented low school-related oral language skills in this population (Fish & Pinkerman, 2003; Hart & Risley, 1995; Snow, Burns, & Griffin, 1998). Poverty and its common correlates of lower parental education and stressful living conditions appear to strongly influence children's developmental trajectories in oral language and emergent literacy skills (Arnold & Doctoroff, 2003; Bradley & Corwyn, 2002; Kaplan & Walpole, 2005). Therefore, these children are often at risk for arriving at school with less developed language skills than peers from advantaged backgrounds (Halle, Kurtz-Costes, & Mahoney, 1997). Children from backgrounds of persistent poverty are at particular risk for starting and staying behind their peers throughout schooling (Aikens & Barbarin, 2008). Therefore, early intervention on language skills is critical to enhance language and literacy outcomes for these children. In the present study, we developed a brief (approximately 5 min a day) instructional routine targeting inconsistency detection. In our study, instruction was delivered in small groups (three to four children), but the routine is flexible and appropriate for whole class or one-on-one instruction (see next for details).

METHOD

Participants

A total of 75 children (38 girls; mean age = 57.07 months, SD = 8.53 months) in prekindergarten from eight classrooms in four public schools participated in the study. The sample of children was composed of approximately 56% African Americans, 29% Caucasians, and the rest included Asian, Hispanic, and multiracial children. The children were recruited from high-poverty schools whose free and reduced lunch proportions ranged from 67% to 85%. Children with severe intellectual disabilities were excluded. Although school records did not include information about children's English language learner status, interventionists noted that all the children understood directions in the intervention. According to school records, none of the children had any documented hearing difficulties or language impairments. All participating children received a book as a gift.

Of the 75 children with parental consent, 41 were randomly assigned to the treatment condition and 34 were assigned to the comparison or practice-as-usual condition. The slight imbalance in the number of students in the treatment versus comparison conditions was partly due to practical constraints of creating small groups of children composed of three to four children per group. Randomization occurred at the classroom level such that approximately half of the children with parental consent within each class were assigned to the treatment condition and the others to the comparison condition. Of the four participating schools, three schools used the Creative curriculum, and one school used the

Houghton Mifflin Pre-K curriculum. A total of five children (four in the treatment condition) dropped out of the study and, thus, 70 children were assessed at posttest. We could not find any systematic reason why attrition was greater in the treatment condition, but attrition was mainly due to children's moving to another school or other areas. No differences were found in the outcome measure (i.e., inconsistency detection task) at pretest between children who stayed in the study versus those who did not ($F = 1.32$, $p = .24$). When preliminary analysis was conducted, exclusion of these children yielded essentially identical results. Therefore, we report results using the full sample. In the statistical analysis, we accounted for children's performance prior to their exposure to intervention (i.e., pretest score).

Comprehension monitoring assessment

An experimental inconsistency detection task was developed, piloted, and used to assess children's comprehension monitoring (Kim & Phillips, 2014). In this task, children heard short vignettes[1] or stories consisting of two to three sentences and were asked to identify whether the stories were silly (external inconsistency; 10 items) or made sense (internal inconsistency; 10 items). Silly stories were externally inconsistent ones (Baker, 1984a); that is, content contradicted children's world/general knowledge. An example of a silly story is as follows: "Sally has a pet pig. Her pig is very good at flying in the sky." After hearing this, children were asked to identify whether the short story was "silly," and if so, were asked to explain why. The meaning of silly was explained to children as follows:

Let's talk about what it means when a story is silly. Stories are silly when it does not happen in real life. For example, suppose you heard one of the stories, "Sharks live in a tree." This sentence is silly because sharks do not live in trees. They live in the ocean.

There were two practice items and 10 experimental items. Children were provided with feedback and explanation during practice items.

The other type of stories were those with internal inconsistencies—stories that included contradictions within the story (10 items). For example, one item stated, "Giraffes are very tall animals. Giraffes are short animals." Children were asked to identify whether each story made sense, and if not, were asked to explain why. The meaning of "making sense" was explained as follows:

Let's talk about what it means when a story does not make sense. Stories do not make sense when all the sentences do not go together. For example, suppose you heard one of the stories, "Rabbits love carrots," then later you heard, "Rabbits hate carrots." These two sentences do not go together. It would be confusing to have two sentences that do not go together. When sentences do not go together, exclusion of then the story does not make sense.

There were two practice items and 10 experimental items. Children were provided with feedback and explanation during the practice items. Consistent and inconsistent stories across external and internal inconsistency items were randomly ordered. For inconsistent stories, the accuracy of children's explanation was scored, and thus, a total possible score was 30: 10 points for correctly identifying 10 consistent stories and 20 points for correctly identifying 10 inconsistent stories and associated explanations. Reliability estimates (Cronbach's α) were .71 and .86 for the pre- and posttest, respectively. Cronbach's α is a measure of internal consistency (how items consistently examine a skill), which examines how performance on an item is related to performance on the other items.

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[1]We acknowledge that the term, *story*, may not be adequate for the short vignettes or statements used in the study. However, for consistency with previous literature (e.g., Kim & Phillips, 2014) and terms used in the assessment and intervention for the children in the study, we use the term, story. In the pilot study, we found that stories longer than three to four sentences were difficult for prekindergarten children from low SES backgrounds.

Description of intervention

The intervention was conducted in small groups of four children typically for 8 weeks, four times per week (typically from Monday to Thursday). When a child missed sessions due to absence, missed sessions were taught on Friday. Each lesson had a scaffolded learning format of I-do, we-do, and you-do (Pearson & Gallagher, 1983). The lesson plan was highly scripted. The weekly lesson protocol consisted of four lessons from Day 1 to Day 4, and lessons for each day built on concepts established in prior lessons (see Table 1 for an overview of the instructional sequence from Day 1 to Day 4). Lessons were sequenced starting from external inconsistencies and transitioning to internal inconsistencies. This was because a pilot study revealed that internal inconsistencies were initially too challenging for prekindergartners from low SES backgrounds. Therefore, in the first 4 weeks, children were presented with externally inconsistent stories (i.e., silly stories). For example, children heard, "Sharks live in a tree," and were asked to identify whether the short story was "silly." If the story was silly, then the children were asked to explain why. The meaning of silly was explained using similar language to that in the assessment described earlier.

In the latter half of the 8 weeks, children were presented with internally inconsistent stories (Baker, 1984a). In each instance, children heard a short story and were asked to identify any parts of the story that did not make sense. The meaning of "making sense" was explained as sentences not going together (see description earlier). Children also were provided with consistent stories so that they did not always expect inconsistent stories in the lesson. The ratio of inconsistent versus consistent stories was approximately two to one. The rationale for including a greater number of inconsistent stories was because detecting inconsistency was the focal target in the intervention. All the stories were told with accompanying illustrations in the first 4 weeks, but illustrations were progressively removed in the second 4 weeks. For instance, in Week 5, illustrations were presented in Days

Table 1. Instructional sequence from Day 1 to Day 4

Weeks	Stories	Day 1	Day 2	Day 3	Day 4
1–4	Externally inconsistent stories	Introduction of inconsistent story	Review of Day 1 inconsistent story + new stories	Inconsistency story review of Days 1 and 2 + new stories	Review of consistent and inconsistent stories
5–8	Internally inconsistent stories	Introduction of inconsistent story	Review of Day 1 inconsistent story + new stories	Inconsistency story review of Days 1 and 2 + new stories	Review of consistent and inconsistent stories

1 and 2 when new consistent and inconsistent stories were introduced to children, but not on Days 3 and 4. Progressive removal of illustration was implemented to promote children's application of comprehension monitoring or inconsistency detection in naturalistic contexts for two reasons: (1) children are not typically provided with illustrations in oral language interactions, and (2) we wanted children to focus on oral language comprehension, not just on the pictures. Here is a brief description of a typical progression of lessons from Day 1 to Day 4 in the first 4 weeks focusing on externally inconsistent stories.

On Day 1, children were introduced to a short inconsistent story with a description about the meaning of "silly." Then, a story was read aloud to the children while an accompanying illustration was presented to them simultaneously. For example, the following story was presented with an illustration "Laura wants to write her name. She used gum to write on her paper" (see Figure 1). The interventionist then asked whether the story was silly, and if so, why. On Day 2, the inconsistent story introduced on Day 1 was reviewed with the illustration again. This was followed by a short consistent story with an illustration. For example, children heard "Ryan has a pet dog. The dog runs fast to catch a stick." with an accompanying illustration (see Figure 2) and were asked whether the story was silly, and if so, why. A similar procedure was followed on Day 3. On Day 4, the consistent and

Figure 1. Illustration for an inconsistent story.

Figure 2. Illustration for a consistent story.

inconsistent stories introduced on Days 1, 2, and 3 were reviewed. In each lesson, the interventionist emphasized whether the story they heard was or was not silly.

The same lesson format was used in the latter 4 weeks with a focus on internal inconsistency. For instance, after the children were presented with the following short story, "Jason practices basketball every day because he loves to play basketball. Jason hates basketball," the interventionist asked whether the story made sense or not, and why and why not. Internally consistent stories also were presented, following the same sequence of Day 1 to Day 4. Throughout the entire intervention, gestures such as shaking heads (does not make sense) and nodding (makes sense) were used consistently to reinforce the focal concepts or the key expressions such as "silly," "does not make sense," or "does make sense." At the end of each lesson, the interventionist concluded by stating that "when you listen to a story, you have to listen carefully so that you know if the story is silly or makes sense to you. If the story does not make sense to you, then you should stop, think about it, and ask questions." Each lesson was designed to last approximately 5 min.

Fidelity of intervention

To document and assess fidelity of treatment, an observation checklist was developed (see the Appendix). The checklist included

10 items with four items on the preparation of lesson materials (e.g., lesson script and illustrations) and six items on instructional activities expected to be delivered by interventionists. The preparation of materials was scored dichotomously (1 = yes; no = 0), whereas instructional activities were rated on a scale of 1 to 3 (1 = poor, 2 = average, and 3 = excellent), so that the total possible score was 2s (4×1 + 6×3). Interventionists were observed by two research assistants who were former classroom teachers. The two research assistants were trained on the fidelity measure by watching videos of instruction from a pilot study. They observed interventionists together, and exact percent agreement on the items was 85%. The mean score of fidelity for Interventionist A was 20.50 ($SD = 0.70$, ranging from 20 to 21) whereas the mean fidelity score for Interventionist B was 19 ($SD = 1.41$, ranging from 18 to 20).

Procedures

Children were assessed in a quiet room in the participating schools. The pretest and posttest were administered immediately before and after intervention. Three graduate students in education were trained on the assessment approximately for 1 hr, which included going over the assessment content and time for practice. Assessors were blind to the treatment condition of children they assessed.

Two interventionists were trained for approximately 4 hr about the intervention. One interventionist had several years of teaching experiences in primary grades, whereas the other interventionist had a bachelor's degree in education with prior experience of working as an interventionist in another study. Training included a brief introduction to theoretical background, intervention procedures and materials, and time to practice. Each interventionist taught in two schools throughout the intervention period (Interventionist A taught Schools A and B, and Interventionist B taught Schools C and D). Intervention was conducted in a classroom or in a resource room or library by researcher-trained research assistants (i.e., interventionists).

RESULTS

Descriptive statistics by treatment conditions before and after intervention are presented in Table 2. Across treatment conditions, children had an average score of 15.25 ($SD = 4.66$) in the inconsistency detection task at pretest. Children were also able to correctly identify, on average, approximately seven consistent stories ($M = 6.75, SD = 2.32$) at pretest (not shown in Table 2), suggesting that children understood the task. Furthermore, children had superior mean pretest performance on the external inconsistency items ($M = 8.53^2, SD = 2.60$) than on the internal consistency items ($M = 6.94, SD = 2.77$) at pretest ($F = 22.23, p < .001$). Importantly, children's mean performance ($M = 15.15, SD = 4.84$ for treatment condition; $M = 15.38, SD = 4.50$ for comparison condition) did not differ as a function of treatment condition to which they were assigned ($p = .84$).

After 8 weeks of intervention, the mean score for children in the intervention condition was 21.00 ($SD = 5.89$) whereas the mean score for children in the comparison condition was 17.61 ($SD = 5.67$). Effect sizes were calculated using Hedge's g as suggested by the What Works Clearing House (2013) with the following formula:

$$g = \sqrt{\frac{F(n_1 + n_2)(1 - r^2)}{n_1 n_2}}$$

In this formula, F is computed from the covariate-adjusted within-group variance from the analysis of covariance, n_1 and n_2 are the sample sizes for the given intervention group and the control group, and r is the pretest–posttest correlation for the measure.

The effect size after adjusting for children's pretest was .57 ($p = .008$), which is

[2]Data were missing for one child at the item level, and therefore, the means on the external and internal inconsistencies, which used item level data, do not add up to the total group mean reported above (i.e., $M = 15.25$).

Table 2. Descriptive statistics in the inconsistency detection task by treatment conditions

Treatment				Comparison			
Pretest		Posttest		Pretest		Posttest	
M (SD)	Min–Max	*M (SD)*	Min–Max	*M (SD)*	Min–Max	*M (SD)*	Min–Max
15.15 (4.84)	8–27	21.00 (5.89)	7 – 30	15.38 (4.50)	2–25	17.61 (5.67)	8–28

considered medium (Cohen, 1988). Given that the treatment children were nested within interventionists who taught at different schools, effect size was estimated after adjusting for interventionists (i.e., including interventionists as a fixed effect). This yielded an essentially identical result with the same effect size of .57 because nesting within interventionists had a minimal effect ($p = .35$). The treatment effect is displayed in Figure 3.

DISCUSSION

In this study we examined the effect of explicit instruction on children's comprehension monitoring. Whereas comprehension monitoring has been emphasized as a reading comprehension strategy, little is known about whether comprehension monitoring can be taught in the oral language context to young prereaders, and if so, what is an effective way to provide instruction. Given that children from low SES backgrounds are at a greater risk for low language skills, and that comprehension monitoring is related to listening comprehension (Kim, 2015; Kim & Phillips, 2014), we developed a brief instructional routine that can be implemented on a daily basis. In our study, explicit instruction took approximately 5 min a day, and was provided for 8 weeks.

Overall, explicit instruction on comprehension monitoring had a positive, medium effect after 8 weeks of small group instruction. The positive effect of instruction indicates that
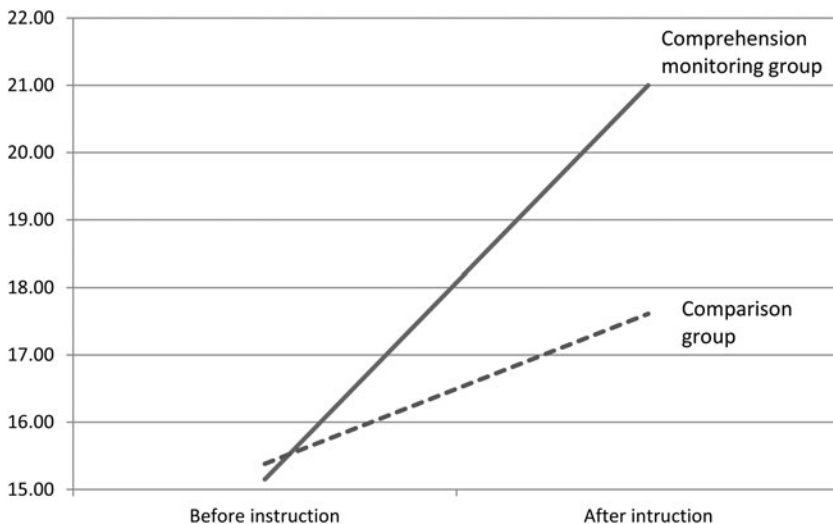

Figure 3. Mean raw scores in the comprehension monitoring task (a maximum possible score of 30) for children in the comprehension monitoring instruction condition (solid line) and comparison condition (dashed line) before and after instruction.

prekindergartners can be taught to identify inconsistency in short stories when the inconsistency was either external or internal. Previous studies targeted comprehension monitoring in the context of reading comprehension for children in middle elementary grades (Elliot-Faust & Pressley, 1986; Markman & Gorin, 1981), but to our knowledge, this is the first study that examined improving comprehension monitoring for prereaders. The present study demonstrated that a brief but explicit and systematic instruction was effective in improving children's detection of inconsistencies or monitoring their own understanding in oral language contexts for young prereaders from low-income families.

Our informal observations as well as anecdotes from interventionists suggested that children found comprehension monitoring instruction to be engaging. Children found silly and inconsistent stories to be amusing when pointed out. Children also expressed fondness for using gestures such as shaking their heads while stating "It does NOT make sense" for an inconsistent story. Interventionists also observed that lessons took slightly longer than the expected 5 min during the first 2 weeks as children were getting used to the routine and new ideas. Interventionists also felt that although there was variation among children, on average, children started attempting to detect inconsistency by the second and third weeks. Finally, although we did not formally elicit teachers' reactions, one of the participating teachers commented in an e-mail, "We are very eager to know what the intervention entailed . . . we want to include the techniques and activities in our classrooms."

One important aspect of the described instructional routine is its ease of use and flexibility. The lesson can be flexibly applied to varied group sizes such as individual children, small group, or whole class. As described earlier, instruction time was not extensive, but only about 5 minutes per day. Furthermore, the instruction follows a predictable routine, and comes with explicit scripting. Therefore, teachers, paraeducators, and classroom aides are likely to be able to deliver the instruction in a wide variety of classroom contexts without extensive professional development.

In addition to implementing the systematic instructional routine described earlier, the instructional strategies and principles may be applied in naturalistic contexts, exploiting teachable moments. For instance, during read-aloud activities, the teacher may insert questions at appropriate moments about whether the focal part of the story makes sense to children and why. Teachers also may employ this strategy during conversations with individual children. When things are not clear during a conversation, the teacher can explicitly request further information to the child by stating, for example, "This part does not make sense to me. Would you tell me more about _____?" In addition, teachers might playfully and purposefully make erroneous statements in conversations or while reading books aloud. For example, when talking about giraffes, the teacher could ask, "Giraffes are known for their short necks, aren't they?" As children object, the teacher could reinforce, "No, that's silly, isn't it? Giraffes are known for their LONG necks." These simple, yet important, statements are key to bringing children's attention to the fact that comprehension (both listening and reading) is a process of making sense of what they hear or read; therefore, they should monitor their own understanding of stories or utterances in daily interactions and probe further when something does not make sense.

LIMITATIONS AND FUTURE DIRECTIONS

In the present study, we were not able to account for the extent to which children participated in the instruction as attendance data was incomplete. Although attendance data were collected, unfortunately we did not have complete information to use in the data analysis because some data were misplaced during transition of staff. A future study accounting for children's attendance would be informative. Furthermore, future studies are needed to examine whether improving

comprehension monitoring leads to better listening comprehension.

According to text comprehension theory and correlational studies, comprehension monitoring is an important contributor to text comprehension, including both listening and reading comprehension (Block & Pressley, 2002; Cain et al., 2004; Elliot-Faust & Pressley, 1986; Kim, 2015, 2016; Kim & Phillips, 2014). However, a future randomized control study is needed to investigate whether enhancing comprehension monitoring plays a causal role in improving listening comprehension. It should be noted, however, that listening comprehension is a complex skill, requiring multiple language and cognitive skills (Kim, 2015, 2016; Florit et al., 2009; Kendeou et al., 2008; Lepola et al., 2012; Tompkins et al., 2013). Therefore, it is likely that concerted efforts in targeting these multiple language and cognitive skills, not just a single skill, are necessary to make a meaningful and visible impact on children's listening comprehension. Future studies are warranted.

Overall, the present study suggests that a brief instruction (approximately 5 min for 8 weeks) with a straightforward systematic approach can be effective in increasing children's comprehension monitoring, and therefore, should be considered as part of daily instruction for young children. It is one piece that may contribute to the goal of supporting increased comprehension of complex language during the school-age years.

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Appendix. Fidelity Measure

Instructor	Observer
Date:	Observer:
Instructor:	Observation date:
School:	Observed start time:
Lesson #: ___Week ____Day	Observed end time:
Number of students in group:	
Scheduled lesson time:	
Name of students in group:	

Preparation   Yes   No

	Yes	No
a. Are materials ready?		
b. Can students see materials?		
c. Are students seated appropriately?		
d. Does interventionist exhibit enthusiasm & warmth toward students?		

Field notes: _____

_____

_____

Activity

	Score (1, 2, or 3)*
1. Did the interventionist go over all the parts of the lesson plan?	
2. Is pacing appropriate?	
3. Is script presented appropriately?	
4. Is independent practice implemented appropriately?	
5. Was the activity taught to mastery?	
6. Did the interventionist implement the motion (i.e., shaking head for "it does not make sense")?	

*1=Poor   2=Average   3=Excellent

Field notes: _____

_____

_____