Discourse Strategies in Early Childhood Book-Related Activities in China

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This study examines the relationship between the discourse strategies which preschool children and teachers' use in book-related activities. Carried out in three cities in China, teachers and children from 12 preschools were videotaped during book-related activities. The current analysis focuses on two questions: (a) What discourse strategies did the children and teachers use during book-related activities? (b) What are the relationships between children’s and teachers’ discourse strategy use during book-related activities? Results show a strong correlation between teacher and student strategy use. In addition, the most used strategies are the least likely to contribute to literacy development.

In China, the mother-child book reading paradigm has been widely used to support children’s literacy development. Several studies have found relationships between the discourse that mothers and children used when they shared book reading (Zhou, 2007; Kang, 2002). Since the Early Childhood Curriculum Guidelines (China’s Ministry of Education, 2001) were put into practice joint book reading activities between a teacher and many children have been widely developed in preschools (Yu, 2008). Some research findings have provided guidelines for teachers with regard to effective strategies for children’s literacy skills development (Yu, 2005), but they have seldom addressed what truly happens in teacher-children book reading activities. Even in the west, few studies have looked at the relationship of book reading and teacher-child conversations in preschool settings (Rosemary, 2002). In an effort to shed light on this critical area, the current study examines the relationship between the discourse strategies that preschool children and teachers use in book-related activities.

THEORETICAL FRAMEWORK and RELATED RESEARCH

Strong correlations have been widely observed in early childhood between aspects of oral language and literacy skills. Exposure to varied vocabularies in different contexts has been found to be an important factor underlying children’s literacy skill development. Vocabularies were considered the best simple predictor of reading skills by Anderson and Freebody (1981) and Dickinson and Tabors (2002), while children’s opportunities to participate in cognitively and linguistically stimulating home and classroom environments were a second factor (Dickinson &
The most important factor, however, is for children to produce and understand extended oral discourse (De Temple & Bears, 1991; Snow and Kurland, 1996) defined as a sequence of sentences or paragraphs on the same topic which two or more participants co-construct and that consists of a number of elemental utterances (Christie, 1994:13; Snow and Kurland, 1996). One kind of extended discourse during book reading, non-immediate talk about past or future events, requires children to go beyond their immediate physical environment to talk about things and events not physically or temporally present, including “recollection of personal experience, comments or questions about general knowledge or . . . drawing inferences and making predictions” (De Temple, 2001: 37). Through the use of sophisticated oral language, children develop literacy skills.

From a sociological perspective, Barnes (1976) suggested that one type of classroom talk, that he labeled exploratory talk, could elicit highly complex responses in relation to language structure and cognitive processing. It was clearly beneficial for children’s cognitive development and much more effective for learning that aimed at understanding and at construction of their own knowledge. More recent empirical studies have also found that engaging in extended discourse, especially in non-immediate talk during book reading, could encourage development of young children’s language, cognition (Whitehurst et al., 1988), and literacy (Davidson & Snow, 1995).

Extended discourse often uses book illustrations as a springboard for discussing personal experiences, making predictions, or drawing inferences. In the process children use more complex language structures as well as information beyond the immediate book to reason, interpret, and analyze book characters and plot (Dickinson and Tabors, 2002). The children extend their language and thinking well beyond the book. They may also build cognitive competencies necessary to meet the demands of increasingly complex texts (Snow, 2007; Tharp & Gallimore, 1988; Pressley, 1976). Analysis of cognitively challenging teacher-child talk during preschool book reading activities (e.g., analysis, prediction and clarification) has shown that such interactions have strong effects on children’s vocabulary development and story comprehension (Smith & Dickinson, 1994).

Goodman et al (2007) and Zhou (2007) have shown that even very young children can make use of effective reading strategies. In particular, they can readily use extended discourse and talk that goes beyond the time frame of the immediate stories (Snow & Kurland, 1996). In a case study, Goodman et al (2007) showed able beginning readers could make use effective strategies such as illustrations to support text construction, drawing on their own experiences, and using intuitive understanding of English syntax and graphic or printed cues.

Other studies of early literacy development have found the following types of parental or teacher talk (i.e., discourse strategies) during book reading to be effective at promoting children’s early literacy development.

• Reading aloud to children in an interactive style (Bus, van Ijzendoorn, & Pellegrini, 1995; Dickinson & Smith, 1994; Hargrave & Sénéchal, 2000)
• Fostering children's understanding of print concepts (IRA/NAEYC, 1998; Stanovich & West, 1989)
• Providing opportunities for children to experiment with writing (Richgels, 2001; Whitehurst & Lonigan, 1998)

Why are these discourse strategies beneficial to children’s literacy development? Theory leads us to believe (Connolly & Bruner, 1974; Vygotsky, 1962) that children’s competence is determined by their interactions with a more competent adult, typically their mothers or teachers. Dickinson and Smith (1994) suggest that talk in such interactions is cognitively challenging. Van Kleeck et al (2002) claim cognitively challenging conversations employ a higher level of cognitive complexity. When a book is part of the interaction the talk mediates the gap between the text and children’s cognition to enhance their understanding. By being exposed to the language and concepts within storybooks children are provided with cognitive challenges of different levels. Massey (2004) summarized the cognitively challenging levels at which children participate in teacher-children conversations. At the first level, they just label or locate the target item in the book. At the second level, they describe and recall what they have learned. At the third level, children summarize what happened in the book, comparing or providing judgments. At the fourth and highest level, they use language to make predictions, solve problems, or make explanations.

PURPOSE and RESEARCH QUESTIONS

A significant step toward understanding the development of children’s early literacy skills, therefore, is to document how they use discourse strategies when engaged with teachers. We were interested in describing the kinds of discourse strategies that occurred during teacher-children interaction in book-related activities and also in the relationships between the teacher’s discourse strategy use and that of the children.

The purpose was to try to find effective discourse strategies that enhance young children's literacy and also to determine the children's level of participation. Carried out in three cities in China, the two-year study focused on two questions. What discourse strategies do children and teachers make use of during book-related activities? How do the strategies used by children relate to cognitive complexity and language structure? What are the relationships between children’s and teachers’ discourse strategy use during book-related activities?

METHOD

The data for this study were collected during the 2006-07 school year in 12 preschools where we had previously conducted action research projects with the staff. The participants were 15
preschool teachers and their class of children in Beijing, Nanjing, and Fuzhou. The teachers were all graduates of normal schools and had all taught for more than two years. Like preschool teachers throughout China, they usually had two book-related activities per week, in which one teacher and 15 to 25 children were seated in a circle to read a big book, talk about the book, or do something else such as perform the story or make their own books related to the story. Each teacher and her class were videotaped once a semester during book activities that lasted approximately 25 minutes. Twenty-two such activities were analyzed in this study. Of the 15 teachers, seven were videotaped twice. The university researcher observed the activities and made detailed anecdotal notes, including who talked, what nonverbal behavior the speaker made, and other factors that might affect the coding process. These notes helped, and in some cases affirmed, the coding and analytical process. All the teacher-children conversations during the 22 book-related activities were transcribed and coded with a coding scheme developed by the researchers.

Episodes within Book-related Activities

Drawing upon an understanding of Vygotsky’s premise (1962) that joint activity is the organizing principle of both material and symbolic human action, and building on the tristratal analysis methods of Nystrand et al (2002) and Nassaji and Wells (2000), 45 teacher-child discourse episodes were identified within the 22 book-related activities. An episode was defined as a portion of a book-related activity that has a similar activity or theme and includes all the talk that takes place in carrying out one task. It consists of an indefinite number of turns. For example, one book-related activity had the following episodes:

Episode #1 (essentially the first part of the lesson; 8 turns): The teacher greets the children simply and focuses them on the book.

Episode #2 (the longest; 172 turns): Reading the book *Panda's Shop* for the first time, the teacher tells the story one page at a time and asks the children to talk about the pictures in the book.

Episode #3 (48 turns): The teacher reads the book for the second time, turning the pages and asking the children to try to recall what they had heard.

Episode #4: (50 turns) Children perform the book with props that the teacher and children provide.

Within the 45 activity/theme coded episodes, the children had 1877 turns altogether; the teachers had 3021 turns. Coded categories were analyzed by episode. Each child's turn or utterance was then coded at three levels: the type of discourse strategy, the level of cognitive challenge (Mehan, 1979; Marzano et al, 1988; Nassaji & Wells, 2000; Nystrand et al, 1997), and the complexity of language structure that the child used (Applebee, 1981; Nassaji & Wells, 2000). Each turn of a child or a teacher was coded as having only one discourse strategy.
Book-related Discourse Strategies

Discourse strategies were derived from the work of researchers such as Snow & Kurland (1996), Goodman et al (2007), Mehan (1979) as well as Marzano et al (1988). Ten strategies were relevant for this study. Both the teachers' and children's turns were analyzed. (Photos illustrating several of the strategies are in Appendix 1.)

(1) ART: Questions or discussions not focused directly on the story or pictures but on their interesting aspects—talking about what the objects in the story are like, how to perform the story, what could be done using the objects, etc. (e.g., TEA (while children performing the story): What does the giraffe need? CHI: A scarf.)

(2) COM: Questions or comments about reactions to the story or picture. (e.g., CHI: It's beautiful.)

(3) CON: Questions or responses that make connections between events or items in the story and experiences the child has had. (e.g., CHI: I have a scarf similar with the panda’s.)

(4) FAI: Talking about the factual information presented in the pictures and story. (e.g., TEA: What’s this?)

(5) IMI: Retelling of the story or telling their own version, but imitating the original structure or language pattern. (e.g., after reading the book Brown Bear, Brown Bear, What Do You See, one child said “Little Mary, Little Mary, what do you see?”)

(6) ORI: Task orientation talk that mediates an interaction that does not deal with the story or the pictures in the book. (e.g., TEA: Go back to your seat. Or CHI: This is your book, Miss Wang.)

(7) PRE: Questions or predictions about what might happen next in the story. (e.g., TEA: What will the bear do then?)

(8) PRI: Discussions about the images found in Chinese characters and pictures. (e.g., TEA: What is the number “3” like?)

(9) RES: Reading or telling the story according to the text or pictures.

(10) SPE: Speculation about the characters or events in the story. (e.g., TEA: Why do you think the bear will be rich again?)

Participation Level to Gauge Children's Engagement in Learning

In order to determine the children's levels of participation and engagement in the literacy learning process, their turns were analyzed for level of cognitive challenge and complexity of language structure.
Cognitive Challenge Level of the Child's Turn (MCL) – 1 is the least complex.

1: Uses only factual information gathering. (e.g., Looking at the picture in the book, the child or teacher says, "The apple is on the desk.")
2: Uses information that has just been learned.
3: Uses the child's own experience.
4: Organizes and applies different kinds of information.
5: Analyzes, generates or integrates complex information.

Complexity of Language Structure Used by the Child (MLS) – 1 is the least complex.

1: The utterance has only one or two words.
2: The utterance is a simply-structured sentence with no modifiers.
3: The utterance includes one sentence with a complex structure or compound, or two sentences.

All the transcripts were coded by Yu, the first author. Then 7 episodes (20% of the total) were randomly selected for an external coder who coded them again. Reliability tests were performed, with the kappa coefficient of .78 indicating good agreement beyond chance.

RESULTS

Kinds of Discourse Strategies the Children (CHI) and Teachers (TEA) Used

Over all, the children had an average of 41.7 turns per episode; the teachers averaged 67.1 turns, over 50% more than the children. In addition, all episode topics were initiated by the teacher, and 94.6% of the children’s turns were responses to the teacher’s questions.

Table 1 summarizes the mean occurrence of the discourse strategies the children and teachers used in each episode. The greatest proportion of strategies used by the children (19% of their turns) focused on factual information in the book, the FAI category. The strategy most used by the teachers (ORI) focused on topics that had nothing to do with the book, but were associated with classroom tasks. It accounted for 40% of the teachers' turns.

In addition, many strategies known to be associated with literacy development were only used for or during a very small proportion of the turns for both the children and their teacher. Children commented about reactions to the story or the picture (COM) during 8% of their turns, made connections between the book and child’s experiences (CON) 6% of their turns, retold or
imitated the story (IMI) 2% of their turns, predicted about what might happen next (PRE) 5%, and discussed the images (PRI) 6% of their turns. A very small proportion of these seven strategies were used by teachers: COM (5%), CON (5%), IMI (1%), PRE (3%), PRI (5%), RES(4%) and SPE (9%).

Table 1. Proportion of children's (CHI) and teachers' (TEA) strategy use, analyzed by episode. (N=45 episodes)

<table>
<thead>
<tr>
<th>Variable</th>
<th>CHI</th>
<th>TEA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mean</td>
<td>SD</td>
</tr>
<tr>
<td>ART</td>
<td>.15</td>
<td>.30</td>
</tr>
<tr>
<td>COM</td>
<td>.08</td>
<td>.06</td>
</tr>
<tr>
<td>CON</td>
<td>.06</td>
<td>.17</td>
</tr>
<tr>
<td>FAI</td>
<td>.19</td>
<td>.21</td>
</tr>
<tr>
<td>IMI</td>
<td>.02</td>
<td>.07</td>
</tr>
<tr>
<td>ORI</td>
<td>.11</td>
<td>.12</td>
</tr>
<tr>
<td>PRE</td>
<td>.05</td>
<td>.12</td>
</tr>
<tr>
<td>PRI</td>
<td>.06</td>
<td>.11</td>
</tr>
<tr>
<td>RES</td>
<td>.15</td>
<td>.29</td>
</tr>
<tr>
<td>SPE</td>
<td>.13</td>
<td>.18</td>
</tr>
</tbody>
</table>

Relation of Children's (CHI) Strategy Use to Their Participation in the Discourse

In order to exam the extent of participation in the teacher-children interactions, this study calculated the cognitive challenge level of children’s turns and the complexity of their language structure. The mean cognitive level (MCL) for all 45 episodes was 2.47 (SD=.61) on a 5-point scale. In other words, most of the time in the teacher-children conversations the children performed at a relatively low level of cognitive processing. The mean complexity of their language structure (MLS) for all episodes was 1.40 (SD=.29) on a 3-point scale. That is to say, in most turns, the children used very simple structures to express themselves.

Table 2. Correlation between CHI’s participation and CHI’s strategy use (N=45 episodes)

<table>
<thead>
<tr>
<th>variable</th>
<th>CART</th>
<th>CCOM</th>
<th>CCON</th>
<th>CFAI</th>
<th>CIMI</th>
<th>CORI</th>
<th>CPRE</th>
<th>CPRI</th>
<th>CRES</th>
<th>CSPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCL</td>
<td>-.024</td>
<td>.328*</td>
<td>.288</td>
<td>-.072</td>
<td>.028</td>
<td>-.299*</td>
<td>.588**</td>
<td>.158</td>
<td>-.049</td>
<td>.661**</td>
</tr>
<tr>
<td>MLS</td>
<td>.256</td>
<td>.106</td>
<td>-.080</td>
<td>-.340*</td>
<td>.115</td>
<td>-.262</td>
<td>.136</td>
<td>-.023</td>
<td>.172</td>
<td>.192</td>
</tr>
</tbody>
</table>

Notes: *p < .05. **p < .01. ***p < .001; C before each strategy stands for CHI.
Table 2 gives the correlations between children’s strategy use (CART, CCOM, etc.) and their participation in teacher-children discourse. Only COM, PRE and SPE discourse strategies used by children were found to be significantly-correlated positively with their participation in the literacy learning process as measured by levels of cognitive challenge (MCL). None of the strategies were significantly correlated positively with the mean complexity of children’s language structure (MLS). It is important to note that MCL and MLS were found to be negatively correlated (p < .05) with children’s ORI and FAI strategy use respectively.

Relation of Children's (CHI) and Teachers' (TEA) Strategy Use

The correlation between children’s and teachers’ strategy use in book-related activities is shown in Table 3. The proportion of the three strategies most used by teachers (ART, FAI and ORI) was not found to be positively correlated with the three discourse strategies of COM, PRE and SPE that children used and that are helpful to literacy learning. Positive correlation was found between the children’s and teachers’ discourse strategies COM, PRE, SPE with the exception of ORI. The teachers’ use of a particular discourse strategy is strongly associated with the children’s use of it.

Table 3. Correlation between CHI’s and TEA's strategy use (N=45 episodes)

<table>
<thead>
<tr>
<th></th>
<th>TART</th>
<th>TCOM</th>
<th>TCON</th>
<th>TFAI</th>
<th>TIMI</th>
<th>TORI</th>
<th>TPRE</th>
<th>TPRI</th>
<th>TRES</th>
<th>TSPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CART</td>
<td>.963**</td>
<td>-.176</td>
<td>-.094</td>
<td>-.421**</td>
<td>.221</td>
<td>-.422**</td>
<td>.089</td>
<td>-.290</td>
<td>-.149</td>
<td>.040</td>
</tr>
<tr>
<td>CCOM</td>
<td>-.154</td>
<td>.974**</td>
<td>.081</td>
<td>-.020</td>
<td>-.062</td>
<td>-.066</td>
<td>.353*</td>
<td>.175</td>
<td>.325*</td>
<td>.389**</td>
</tr>
<tr>
<td>CCON</td>
<td>-.017</td>
<td>.070</td>
<td>.928**</td>
<td>-.040</td>
<td>.109</td>
<td>-.358*</td>
<td>.054</td>
<td>-.047</td>
<td>-.064</td>
<td>.170</td>
</tr>
<tr>
<td>CFAI</td>
<td>-.383**</td>
<td>.047</td>
<td>.017</td>
<td>.874**</td>
<td>-.095</td>
<td>-.138</td>
<td>.137</td>
<td>.089</td>
<td>.247</td>
<td>.096</td>
</tr>
<tr>
<td>CIMI</td>
<td>.223</td>
<td>-.058</td>
<td>.057</td>
<td>-.164</td>
<td>.998**</td>
<td>.051</td>
<td>-.195</td>
<td>-.176</td>
<td>.067</td>
<td>-.068</td>
</tr>
<tr>
<td>CORI</td>
<td>-.121</td>
<td>-.104</td>
<td>-.031</td>
<td>.120</td>
<td>.240</td>
<td>.127</td>
<td>-.183</td>
<td>-.050</td>
<td>.024</td>
<td>-.058</td>
</tr>
<tr>
<td>CPRE</td>
<td>.214</td>
<td>.313*</td>
<td>.286</td>
<td>-.005</td>
<td>-.047</td>
<td>-.125</td>
<td>.951**</td>
<td>.201</td>
<td>.262</td>
<td>.656**</td>
</tr>
<tr>
<td>CPRI</td>
<td>-.256</td>
<td>.243</td>
<td>.058</td>
<td>.165</td>
<td>-.158</td>
<td>.058</td>
<td>.198</td>
<td>.882**</td>
<td>.313*</td>
<td>.190</td>
</tr>
<tr>
<td>CRES</td>
<td>-.178</td>
<td>-.016</td>
<td>-.050</td>
<td>.206</td>
<td>-.071</td>
<td>.267</td>
<td>-.005</td>
<td>.291</td>
<td>.459**</td>
<td>.066</td>
</tr>
<tr>
<td>CSPE</td>
<td>.105</td>
<td>.465**</td>
<td>.225</td>
<td>.067</td>
<td>-.081</td>
<td>-.283</td>
<td>.643**</td>
<td>.156</td>
<td>.129</td>
<td>.988**</td>
</tr>
</tbody>
</table>

Notes: *p < .05. **p < .01. ***p < .001.; C before each strategy stands for CHI, and T means TEA.

The following interchange demonstrates the correlations among the SPE strategy used by teachers and children and between the strategies used by children and their level of cognitive challenge. One teacher and her class of children were reading a book named Go Away, Fly. On one page a fly is on the top of a boy’s nose, and the boy tries to drive the fly away. The teacher initiated talk with the children about the reason to drive the fly away by asking, “Why shall we
drive the fly away?” Only one girl answered the question. Another girl tried to talk about why bees are not bad and turned to another topic, but they both tried to draw an inference.

*Example 1 (file eps1501L05R):*

TEA: 为什么要把苍蝇赶走？
Why shall we drive the fly away? SPE

CHI: 它是坏东西。It is bad. SPE:2:4*

CHI: 蜜蜂不是坏东西。Bees are not bad. SPE:2:4

TEA: 蜜蜂会为我们采蜜。
A bee can make honey for us. SPE

CHI: 他采蜜有时候会叮人，有时候不会，
所以才是好的。He may sting us when he is making honey. Sometimes he doesn’t.
So he is good then. SPE:3:4

TEA: 哦他是蜜蜂是益虫 他是会帮人家
采花蜜的对不对? Yeah. He is…
A bee is a beneficial insect.
He can make honey, can’t he? SPE

* SPE=discourse strategy: 2=the level of cognitive challenge: 4=the complexity of language structure

**DISCUSSION**

These results shed light on aspects of preschool teacher–child interactions during book-related activities in China by providing a first step in identifying the correlations among the discourse strategies used by teachers and children, and between children’s strategy use and their participation in book-related activities.

**Discourse Strategies Used by Teachers**

The findings show many teacher–children interactions (an average of 57%) focused on factual information or on issues unrelated to the book. In related studies Rosemary and Roskos (2002) found that preschool teachers used much more talk to ask for factual information or to praise children than any other kind of talk; Zhou and Zhu (2006) found the majority of mother-child talk is related to immediate situations. Combining these results with those of the current study suggests that teacher–children or mother-child talk about book reading is limited. The teacher talk does not include strategies such as speculation (SPE), prediction (PRE), or comments or questions related to reactions to the story (COM). One possible reason is that teachers have little training about how to talk with children when they are reading picture books.
It is encouraging that some children engage in extended discourse or non-immediate talk that enhances their cognitive, linguistic and literacy development. However, much more is desirable.

Relation of Children's Strategy Use to Children's Participation in Discourse

Analysis of the relation between children’s discourse strategy use and their participation in teacher-child interactions substantiated the importance of extended discourse and the effectiveness of some discourse strategies (COM, PRE and SPE) for children’s literacy development. The children participated in interactions at higher cognitive levels when they used these strategies than when they used others. Partially consistent with previous studies (Kang, 2007: 103-109; Goodman et al, 2007; Hansen, 1981) and also consistent with the analysis of older children's work (Pressley, 1976), it is likely that discourse strategies at high levels of cognitive complexity can mediate the teacher-child verbal interaction and the children’s understanding of the story. This may be because they actively make sense of the story when they comment about their reactions and predict and speculate about the events in the book.

Contrary to some previous studies (e.g., Anderson and Pearson, 1984; Raphael, 1984; Dixon-Krauss, 1996), a significant relation was not found between the other strategies, such as ART (talking about how to perform the story), CON (making connections between children’s experience and events in the book), IMI (retelling of the story or imitating its structure), and PRI (discussions about the book images), and the level of cognitive challenge (MCL). Possibly this is because the children used such a low proportion of these strategies.

A strong negative relationship was observed between the strategy of talking about factual information (FAI) and the complexity of language structure (MLS). Also a negative association was found between the strategy of task orientation talk unrelated to the book (ORI) and the level of cognitive challenge (MCL). That is to say, the FAI and ORI strategies are not likely to benefit the development of early literacy. When the children talked about superficial information in a picture book, they often used utterances with very simple structures (e.g., “Fruits” in Example 2). When they talked about issues unrelated to book content (e.g., “finished it” in Example 2), they use language in a concrete and/or directive way without higher cognitive processing such as imaging, predicting consequences, or formulating hypotheses.

Example 2 (file eps2301L242):

TEA: 好. 好. 魔法小书看好了没有? Okay, okay. Have you finished reading the magic book? ORI
CHI: 看好了. Finished it. ORI:1:1
TEA: 魔法叔叔变出这个蛋糕用了什么材料? What did the uncle magician make the cake of? FAI
TEA: 王芳先说. Wangfang, please.* (Indicating that the child should respond.) ORI
Relation of Children's and Teachers' Strategy Use

The present study also provides empirical support for the widely held belief that teachers’ involvement in extended discourse with children is important. In every case in this study, the teacher’s use of a particular kind of strategy, except the ORI strategy, is very strongly correlated with the children’s. It should be noted that the teachers’ use of the strategies COM (e.g., “What does the tree look like?” in Example 3), PRE and SPE (e.g., “Why does he have a pinafore on?”) were all significantly correlated with the children’s use of them and that these three strategies are positively correlated with children's cognitive level of processing (Table 2). Teacher use of these three strategies may be effective for advancing children’s literacy development.

Example 3 (file eps2604L130)

TEA: （指着书上的大树）这大树什么样呀？
感觉象谁呀？这大树怎么样啊？
(Pointing to the tree on one page of the book.)
What does the tree look like? Who is it like?
What does the tree look like?  COM
TEA: 萧萧，你说. Xiao xiao, please.  ORI
CHI: 大树伯伯. Uncle Big Tree.  COM:1:3
TEA: 哦, Oh.  ORI
TEA: 谁再来说一说呀? Who else comes to talk about it?  ORI
TEA: 欧阳，你说. Ouyang, please.  ORI
CHI: 有点老了. It looks a little old.  COM:2:3
TEA: 是嘛? Yes?  ORI
TEA: 请坐. Sit down, please.  ORI
TEA: 他怎么还系着围裙呀?
Why does he have a pinafore on?  SPE
TEA: 这这是谁呀? Who is it?  COM
TEA: 陶新宇，你说说. Tao xinyu, please.  ORI
CHI: 大树妈妈. Mother Big Tree  COM:1:3
TEA: 哟他觉得象树妈妈.
Oh, he thought it looked like Mother Tree.  COM
LIMITATIONS

Several limitations of this study should be kept in mind. First, we used MCL and MLS to define the children's participation in learning during book-related activities. Future studies would do well to employ a wide lens by assessing children's early literacy skills, e.g., their awareness of Chinese characters and word recognition. Secondly, the sample of this phase of the analysis of only 45 episodes of book-related activities is so small that we could not find the relation between teachers' and children's strategy use in different age groups. These limitations may limit the implications of our results.

CONCLUSION

Many experts contend that asking children to make comments about issues in the book, making predictions about the plot, and speculating about the events engage them as active learners (Bus, van Ijzendoorn, & Pellegrini, 1995; Hargrave & Sénéchal, 2000; Whitehurst & Lonigan, 2001; Snow, 1983; Richgels, 2001). When children are encouraged to become active participants rather than passive listeners, they are more likely to experience improvements in their vocabularies and comprehension abilities (Hargrave & Sénéchal, 2000; Karweit & Wasik, 1996).

Previous studies also have found that activating and drawing upon children’s background knowledge in relation to story content supports comprehension (e.g., Schifini, 1994; Dickinson et al., 2002) as does encouraging them with book-related dramatic play (Rowe, 1998; Berk & Winsler, 1995). But this study did not find significant positive effects of the strategies of ART (talking about how to perform the story) and CON (making connections between children’s experience and events in the book) used by teachers, nor the strategies of IMI (retelling of the story or imitating its structure), and PRI (discussions about the book images).

In sum, analysis in this study found that three of the discourse strategies — COM, PRE, SPE — are significantly correlated with children’s cognitive challenge level (MCL), suggesting that they are effective discourse strategies which could contribute both to children’s early literacy development and to their development of thinking skills. In addition, the teachers’ discourse strategies show a strong correlation with the children’s strategy use, therefore strengthening the case that these are effective strategies that assist children in developing early literacy. Though
COM, PRE, and SPE are effective strategies, teachers seldom used them, but rather emphasized the least challenging interactions. It would therefore be beneficial if training for preschool teachers helped them see the significance of using more complex strategies and provided them opportunities to practice them.

REFERENCES


APPENDIX 1
Examples of Discourse Strategies

*Photo 1.* The ART strategy. Three children are acting out the story in the picture book, *I’ll Never Go Away from You.* One child is reading and two are playing.

*Photo 2.* The COM strategy. The teacher and child are talking about the shape and color of the ear in the picture.

*Photo 3.* The CON strategy. The teacher and children are reading a book together, and one girl said that she had several chickens in her family and she feeds them rice.
Photo 4. The IMI strategy. After reading a picture book and a rhyme in the book, the children were asked to tell their own rhyme. One boy retold a rhyme and drew a picture about it. The teacher wrote the rhyme down.

Photo 5. The PRE strategy. The teacher is telling the children the story from a big book. The children are listening to the story and happen to predict what happened next.

Photo 6. The SPE strategy. After the teacher told the story, the children were asked to read the book with their peers and try to find something interesting. Here two girls are arguing about why the pig has a comb.