JAPANESE MOTHER-CHILD INTERACTION DURING PICTURE STORYBOOK READING

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INTRODUCTION

Interaction that takes place during picturebook reading has been described over the past decade, as a part of "the movement of reading and writing out of the laboratory and into the real world" (Bloome, 1987). Case studies or correlational studies on adult-child interaction around picture books fall into two categories: parent-child interaction in the home and teacher-child interaction at school.

Ninio and Bruner (1978) investigated the achievement of the labelling of one mother-infant dyad between 0; 8 and 1; 6, and found that joint picture-book reading activity had the structure of a dialogue very early on.

Bloom (1985) also observed bedtime story reading events of a mother and her child between 1; 11 and 2; 9, using microethnographic analysis and showed that picture book reading activity was a very social process.

Martinez (1983) observed a four-and-half year old girl sharing picture books with her father over a four month period in order to gain insight into the roots of reading comprehension. She described how a young child commented, made inferences, drew conclusions, and made predictions while interacting with her father.

Seki (1990) observed and described the changes of responses of a 6-year-boy to a picture book over 10 repeated readings. The boy's questions and comments changed in quality from identification of characters to prediction of the words, phrases, and sentences and he acted out the story in the last phase. She described the process of how he decoded and memorized text during repeated reading sessions.

Martinez and Roser (1985) observed the "storytime" of preschool children at home and in school and analyzed adults' language according to the functions it served. They described three roles that adults play during story readings: (1) co-responders, (2) informers/monitors, and (3) directors.

Pellegrini et. al. (1990) examined the behaviors of black Head Start children and their mothers around a series of experimental joint reading context in their homes. They found that genre affected mothers' teaching strategies, and mothers adjusted their level of teaching strategies to children's level of task competence.

Morrow (1988) conducted an experimental research focused on the effects of one-to-one story readings in the classroom setting, using 10 picture books. Her subjects were four-year-old children from lower socio-economic homes who in many cases, had not been read to at home. She found that one-to-one story reading did increase

the number and complexity of questions and comments.

The above-mentioned studies indicate that children's responses often reflect adult interactive behavior, their age, the familiarity of books, and economic status. Although the studies reviewed have suggested very crucial aspects of adult-child interactions during joint reading sessions either at home or at school, very few observational studies on what actually occurs in adult-child interaction around picture books have been done in Japan. Accordingly, adequate coding categories or systems which illustrate specific features of Japanese adult-child joint reading context are not available.

The purpose of this study was to collect and inspect the interactions of Japanese mothers and their three-to six year old children as picture storybooks were shared. This was done in order to devise an appropriate coding system which would illustrate characteristics of Japanese mother-child interactions around picture books.

METHOD

Subject

The subjects for this study were twenty-four children (ranging from 4 ; 08 to 6 ; 07 of age) who are enrolled in the experimental nursery school in RCCCD plus their four younger siblings (ranging from 2 ; 11 to 4 ; 01) and their mothers.

The nursery school has more than 3,500 children's books of various genre. The children can read them by themselves freely during the free play session (2 and half hours a day) at the children's library. As an experimental nursery school attached to Hokkaido University, there are many adults (two regular teachers and the author or undergraduate and graduate students) available to read books to the children. It is quite usual to see two or three children sitting beside an adult on the couch and listening to the text while they look at the pictures, and point to the book or talk to each other in the library.

The library is operated as the mothers' voluntary activity. Mothers of the library activity group register all the new books, and mend books if necessary. On Wednesdays, two of the mothers and one of the teachers of the school take turns reading aloud to children. The children are read three books in group and they can borrow three books from the library afterward to keep them for one week at home. Lending and accepting books is also the mothers' responsibility.

Therefore being read to individually or in group, is quite a common practice for children of the school.

Data Collection

Home observations were done from November 21 nd. to December 4th, 1990. Mothers were asked to read a book which was requested by their children. This was done in order to learn "what actually occurs" during "story time", to understand the wide range of interactional patterns and individual variation, and to get children motivated to be read to. Twenty-seven story books and one informational book were thus selected by the 28 children and read by their mothers. Verbal mother-child interaction during book reading sessions were both video-taped and audio-taped in order to transcribe them.

Data Analysis

The one mother-child pair who read an informational book was excluded from the data analysis.

For the first step of analyzing data, decontexcualized verbal records in transcriptions were dissected into communication unit (CU), which is differentiated in terms of the meaning (content) of the subject's utterances. The interaction unit (IU) was also determined by sequential continuity of CUs which indicated the same topics.

Depending on its content, each CU was coded as follows:

Statement·····S	SR:	spontaneous report, call attention
	SW:	impression, will, thought
	TB:	teaching behavior
	AP:	applause
	CR:	criticism
	SM:	muttering to oneself
Question ·····Q	WHQ:	WH-question
	YNQ:	Yes-No question
	CNQ:	confirmative question
Reply·····R:		reply for Yes-No question
Explanation·····E:		reply for WH-question or CN-question
Direction ·····D:		direction or order
Proposal ·····P:		proposal or suggestion
Acceptance ·····A:		acceptance or approval
Negation ·····N	NG:	negation
	NR:	rejection
Praise ·····P		

As above a coding system has been utilized for analyzing mother-child interaction and father-child interaction mainly with toys in the eco-psychological studies (Miyake, et. al. 1978; Seki, 1978). It was not sufficient to describe the quality of mother-child interaction during storybook reading.

According to Bader (1976), "A picture book is text, illustrations, total design; an item of manufacture and a commercial product; a social, cultural, historical document; and, foremost, an experience for a child. As an art form it hinges on the interdependence of pictures and words, on the simultaneous display of two facing pages, and on the drama of the turning of the page" (p. 1). Close look at the utterances during the coding session into CUs showed that those utterances were stimulated by the illustrations, text, and other stimuli. In order to devise a new coding system which can fully illustrate mother-child interaction in the storybook reading sessions, the CUs were re-coded into three main categories: (a) focus on illustration (details, setting, events, cause, character's emotion, child's explanation, child's taste, inference, emotion, "I don't know"), (b) focus on text (title, printings, format, word definition, characters, events, prediction, child's explanation, mother's expression of "that's what text says", inference, "I don't know", decoding, call attention, answer text question, talk about self), and (3) the others (child's background knowledge, child's utterance, child's

behavior, association of text to child's life, child's intention, child' opinion, ending, heuristic muttering, positive feedback, acceptance, confirmative questions, laughing).

RESULT

Types of Mother-child-book Interaction

Three types of mother-child interaction were observed: 1) Reader/Listener, 2) Mother-Lead, and 3) Child-Lead.

1) Reader/Listener type: In this type, the mother kept the reader's role for the most part whereas the child remained in the listener's role. A total of only four CUs were found either from the mother or the child in this group. The child sat still besides his/her mother with his or her black eyes moistened, looking as if he/she went into the world of the story on a magic carpet woven by his/her mother's voice. Eight out of 27 pairs (29.6%) fell in this category. The child's average age was 5; 10 (ranging from 4; 11 to 6; 07). The mother's average years of education was 12.3. Seven of the children chose storybooks which were familiar to them. Five of them could read and write Hiragana freely. The rest could at least decode some of the Hiragana and write their names.

2) Mother-Lead (M-L) type: This type was identified by the first utterance analysis of each IU. More utterances were signaled by the mother than the child. There were eight pairs in this type. The child's average age was 5; 05 (ranging from 4; 02 to 6; 05). The mother's average years of education was 13.9. Five of the children chose familiar books to read. Five children could read and write Hiragana freely, one could read some but could not write, and two could neither read nor write.

3) Child-Lead (C-L) type: More utterances were initiated by the child than the mother in the IUs in this type. There were 11 pairs in this type. The child's average age was 4; 03 (ranging from 2; 10 to 6; 04). The mother's average years of education was 13.1. Eight of the children chose familiar books to read. Six children could read and write, one could read some, and four could neither read nor write Hiragana.

Comparison of Utterances between Mother-Lead Type and Child-Lead Type.

a) Mothers' Utterances

Mothers' utterances were either responded to or not responded to by their children. Mothers' utterances in M-L type were responded to 91 times, but 61 CUs (40%) were not responded to. Mothers' utterances in C-L type were responded to 61 times, 17 CUs (21%) were not responded to.

Table 1 presents the comparison between the M-L type and the C-L type of mothers' utterances which were responded to by their children. Mothers in the M-L type uttered twice as much as mothers in the C-L type. The former asked many questions (47 CUs), whereas the latter asked fewer questions (12 CUs). Remarkable differences were found in the quality of questions and comments in these two types. In the M-L type, mothers asked their children questions to predict events, to confirm their children's explanations, to explain their children's intention and opinion, as well as to identify the contents of illustrations. In the C-L type, mothers' questions were mainly identification of illustrations. Instead, in the C-L type, the mothers commented more

TABLE 1

M-L Type vs. C-L Type of Mothers' Utterances that were Responded to by their Children.

		M-L Type 91 CUs/8 mothers			*C-L Type* 64 CUs/11 mothers	
FOCUS ON ILLUSTRATION	32			29		
[Question]		16			9	
detail (content, character)			WHQ 7 YNQ 4			WHQ 4 WHQ(E) 3 YNQ 2
setting			WHQ 1			
cause			WHQ 1			
child's explanation			YNQ 1			
child's taste			WHQ 2			
[Report]		11			12	
detail			SR 6 NG 2			SR 1 TB 2 NG 3 E 1
setting			SR 2			
event						SR 3
written to oral			SR 1			
character's emotion						R 2
[Inference]		1			0	
			SR 1			
[Emotion]		3			4	
			SW 3			SW 4
[Unknown]		1			0	
			SR 1			
FOCUS ON TEXT	20			9		
[Question]		18			0	
word definition			WHQ 3			
event			WHQ 1			
prediction			WHQ 9			
child's explanation			YNQ 5			
[Report]		2			9	
title						SR 1
word definition						SR 1
character						SR 1
event						SR 2
printings						SR 1 E 2
format						SR 1
answer text question			SR 1			
quoting from the text			SR 1			
OTHER	39			30		
[Question about child]		13			3	
background knowledge			WHQ 1 YNQ 3			
emotion			WHQ 1			YNQ 1
experience						YNQ 2
intention			YNQ 1			
opinion			WHQ 1			
utterance			YNQ 2			
behavior			YNQ 4			
[scaffolding]		2			0	
			SR 2			
[Association of text to life]		1			0	
			SR 1			
[Call attention]		1			2	
			D 1			D 1 P 1
[Positive feedback]		8			4	
			A 8			A 4
[Acceptance]		10			14	
			A 10			A 14
[Confirmative Question]		3			6	
			CNQ 3			CNQ 6
[Laughing]		1			1	

about the text (9 CUs), such as title, word definition, character, event, printings and format, whereas the mothers commented on the text in the M-L type were only twice.

Table 2 presents the comparison between M-L type and C-L type of mothers' utterances which were not responded to. In the M-L type, the mothers asked many questions (28 CUs) which were not responded to, but in the C-L type, the mothers asked only one question which was not responded to. In the M-L type, the children ignored their mothers' questions which were mainly focused on text, such as prediction, child's explanation, and events. The M-L mothers' comments that focused on illustrations, such as identification of details, settings, and explanation of events were also ignored by their children. Whereas all of the C-L mothers' questions about identification of illustrations were responded to by their children.

TABLE 2

M-L Type vs. C-L Type of Mothers' Utterances that were not Responded to by their Children

	M-L Type 61 CUs/8 mothers		*C-L Type* 17 CUs/11 mothers	
FOCUS ON ILLUSTRATION	20		7	
[Question]	5		0	
detail (content, character)		WHQ 1 YNQ 3		
events		WHQ 1		
[Report]	13		5	
detail		SR 7		SR 1
setting		SR 2		
events		SR 3		SR 4
written to oral		SR 1		
[Inference]	1		0	
		SR 1		
[Emotion]	1		2	
		SW 1		SW 2
FOCUS ON TEXT	26		2	
[Question]	19		1	
word definition		WHQ 1		
event		WHQ 2		WHQ 1
(scaffolding)		YNQ 2		
prediction		WHQ 9		
child's explanation		YNQ 5		
[Report]	2		0	
event		SR 2		
[Prediction]	1		0	
		SR 1		
[Inference]	1		1	
		SR 1		SR 1
[Emotion]	3		0	
		SW 3		
OTHER	15		8	
[Question about child]	4		0	
background knowledge		WHQ 1 YNQ 1		
behavior		YNQ 1		
emotion		YNQ 1		
[Association of text to life]	3		1	
		SR 2 SW 1		SR 1
[Call attention]	2			
		WHQ 2		
[Ending]	6		7	
		SR 6		SR 7

TABLE 3

M-L Type vs. C-L Type of Children's Utterances that were Responded to by their Mothers

	M-L Type 65 CUs/8 children		*C-L Type* 76 CUs/11 children	
FOCUS ON ILLUSTRATION	22		39	
[Question]	2		9	
detail (content, character)		WHQ 1 YNQ 1		WHQ 5 YNQ 1
cause				WHQ 1
character's emotion				YNQ 2
[Report]	16		26	
detail		SR 4 NG 1 NR 2 R 2 E 5 SW 1		SR 17 R 5 E 4
setting		E 1		
[Inference]	2		0	
		SR 1 NG 1		
[Emotion]	2		4	
		SW 2		SW 4
FOCUS ON TEXT	25		25	
[Question]	0		6	
word definition				WHQ 1
event				YNQ 2
printing				WHQ 1 YNQ 2
[Report]	7		8	
title		E 1		SR 2
word definition		E 1		SR 1
character		R 2		SR 2
event		E 1 NG 1 SR 1		SR 1
self				SR 2
[Prediction]	9		5	
title				SR 1
events		E 7 SR 2		SR 4
[Association of text to life]	3		2	
		SR 2 E 1		SR 1 R 1
[Inference]	1		0	
		E 1		
[Unknown]	4		0	
		E 4		
[Decoding]	0		2	
				SR 2
[Call attention]	1		1	
		D 1		D 1 SR 1
[Answer text question]	0		1	
				SR 1
OTHER	18		12	
[Background knowledge]	2		0	
		R 2		
[Utterance]	3		0	
		R 3		
[Behavior]	3		0	
		R 3		
[Association of text to life]	1		0	
		SR 1		
[Ending]	0		1	
				SR 1
[Heuristic monologue]	0		1	
				SM 1
[Positive feedback]	2		0	
		A 2		
[Acceptance]	3		4	
		A 3		A 4
[Confirmative Question]	2		2	
		CNQ 2		CNQ 2
[Laughing]	2		4	

b) Children's Utterances

Children's utterances were more often responded to by their mothers. Of all the mothers' utterances (233 CUs), 66.6% of CUs (155) were responded to by their children, 84.4% of children's utterances (141 CUs out of 167 CUs) were responded to by their mothers.

Table 3 presents the comparison between the M-L type and the C-L type of children's utterances which were responded to by their mothers. In the M-L type of

TABLE 4

M-L Type vs. C-L Type of Children's Spontanous Utterances and Answers that were Responded to

	M-L Type	*C-L Type*
Spontaneous Utterances	20 CUs	61 CUs
question	2	15
comment	16	42
laughing	2	4
Answers	34	10
to WHQ	22	4
to YNQ	12	6

TABLE 5

Children's Utterances that were not Responded to by their Mothers in Relation to Familar Book vs. Unfamiliar Book

	Familiar Book 29 CUs/13 children		*Unfamiliar Book* 7 CUs/10 children	
FOCUS ON ILLUSTRATION	5		1	
[Report]	2		0	
detail		SR 2		
[Emotion]	3		0	
		SW 3		
[Association of text to life]	0		1	
				SR 1
FOCUS ON TEXT	24		6	
[Question]	0		1	
event				WHQ 1
[Report]	1		0	
event		SR 1		
[Text]	4		2	
text word repetition		SR 3		SR 1
telling sentence with text		SR 1		
decoding				SR 1
[Prediction]	8		0	
upcoming word		SR 2		
title		SR 1		
event		SR 5		
[Creation]	8		2	
negative sentence		SR 1		
written into oral		SR 1		
figurative language		SR 2		
onomatopeia		SM 3		SM 2
word play		SR 1		
[Laughing]	1			
[Emotion]	2		1	
		SM 1 SW 1		SW 1

children's utterances, 65 CUs were responded to but 16 (22.5%) CUs were not responded to. In the C-L type of children's utterances, 76 CUs were responded to, and 10 CUs (11.6%) were not responded to.

In the C-L type, children asked questions and commented more about illustration than in the M-L type. The number of total CUs focused on text were the same in both groups with differences in quality. During the interaction in the C-L type, the children spontaneously commented on text. On the contrary, during the interaction in the M-L type, the children's utterances were mainly answers to their mothers' questions. In the C-L type, the children interacted more actively with their mothers and with books. Table 4 shows the number of both children's spontaneous utterances and answers that were responded to. The C-L type of children's spontaneous utterances were 61 CUs, and those of the M-L type were 20 CUs. Whereas the M-L type of children's answers were 34 CUs and the C-L type of children's answers were 10 CUs.

Child's Response to Familiar Storybook vs. Unfamiliar Storybook

Children interacted differently with familiar books and unfamiliar books. Table 5 presents the comparison between familiar storybooks and unfamiliar storybooks, with respect to the children's utterances which were not responded to by their mothers. Children of both types interacted with the text more actively with familiar books than with unfamiliar books. They reacted to text words and sentences, predicted events, and created their own words or sound effects when the book was familiar to them.

DISCUSSION

The objective of the study was to devise a coding system for analyzing Japanese mothers and their children's interactions in picture book reading sessions. Some of the researchers have studied adult-child interaction around books in the light of adults' reading strategies which facilitate children's language development or literacy (Morrow, 1988). However, adult-child interaction is a bi-directional process rather than a uni-directional process in which only adults' behavior affects children's behavior. Pelligrini et. al. (1990) suggested that children's level of task participation, that is, the extent to which they initiated interaction with their mothers, responded relevantly to mothers' elicitations, and related book stimuli to external stimuli, is a more sensitive index of children's task competence than more traditional psychometric measures.

Mother-child interaction when a book is shared, however, is not only a dyadic one but also a complicated interaction around the book: mother-child-book interaction, child-book interaction, mother-book interaction, and mother-child interaction. Sometimes mothers and children co-respond to the book stimulated pictures or text and both. Mothers are constructors of meaning when they read a picture book consulting of their own much broader experience. Above all, children are active participants and constructors of their own meaning when a picture book is read. Sometimes mothers associate children's experience with the book.

In order to describe observed mother-child interaction in the study, each utterance was categorized in two ways, from the view of mother-child communicative function and from the view of mother-child-book interaction.

Insofar as the study sample was not randomly selected, their ages were not controlled, and the books selected were not controlled either, these observations are limited to the specific mothers and children and books studied thus far. It was impossible to find a completely new book for all the children studied. However this study does illustrate the insights into what is actually occuring between Japanese mothers and their children in the picture book reading context.

In spite of the fact that the books they read were very familiar to them, almost 30% of the mother-child pairs did not make any decontextualized utterances. Martinez (1983) found that repeated experiences with the same story made her subject more verbal. Morrow's (1988) subjects in the experimental repeated-reading group made significantly more questions and comments than the control group. Above all they made more comments than the experimental different-book reading subjects. Teale (1987) reviewed storybook reading interactions and stated that " storybook reading is characteristically a socially created activity. Children never encounter simply an oral rendering of a text in a storybook reading situation " (p. 60). Is this type of mother-child pairs peculiar to Japanese? When looking at the children's age of the Reader/Listener type, they were the oldest among the three types of children. Interestingly, the group of children who were lead by their mothers (Mother-Lead) were the second oldest, and the group of children who lead mothers (Child-Lead) were the youngest. The size of the ratio of children who could read and write also followed this pattern. It is very safe to say that the Reader/Listner type of children are more cognitively competent than those of C-L type in understanding stories. The different types of mother-child interaction might be due to the children's age differences. In Martinez's study and Morrow's study, their subjects were similar in age to the children in the C-L type. Do American older children (around 6 years of age) act like the children in the Reader/Listener type during the storybook reading sessions?

In the M-L type, why were 40% of mothers' utterances ignored by their children? The children seemed very inactive. They did not tell their mothers what they saw or what they thought. They did not ask questions. Because the mothers did not know what their children saw or how they constructed their meaning, they asked them many questions. They did not ask mere identification of details but description and prediction of events. These questions required higher cognitive skills of the children than identification of the details. They might be too difficult for children to answer. In the C-L type, the children spontaneously asked questions and made comments on books. Their utterances were focused on the illustrations rather than the text. The mothers could easily detect how their children responded to the books. They did not have to ask questions to monitor what they saw or how they felt because the children asked questions or made comments spontaneously.

Mothers of three types seemed to adjust their interacting patterns to their children's cognitive level. The children's behaviors in the three types might be explained by Vygotsky's (1962, 1978) notion of internalization. In the C-L type, the youngest children externally expressed their thoughts and their thoughts were extended by interactions with mothers. In the Reader/Listener type, children's thought might have already internalized. In the M-L type, the children seemed to be in the transition

period from the externalization of thought to the internalization of thought. They began to construct the meaning of the books without speaking out. The mothers' questions seemed to assist their understanding or constructon of the meaning of the stories, even though most of their questions were not responded to. This can be discussed in terms of Vygotsky's notion of the zone of proximal development.

Further research needs to be conducted to probe whether these interactional patterns were due to the age differences of children, or mothers' teaching strategies reflecting their educational level by more controlled observation or experiment. It is also necessary to collect data which will show the characteristics of children's responses toward familiar books and unfamiliar books.

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