

# An Investigation of Structures and Prosodic Features of Child Directed Speech During Shared Reading

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## Abstract

Child-directed speech objectives are a) attract and hold baby's attention, b) help process of breaking down language into understandable chunks, c) make the conversation more predictable by keeping the conversation. This paper compares the structures and prosodic feature used during shared reading by two Iranian mothers of two different aged children, i.e. 2.5 and 4. This study carried out through mothers' speech recording while describing picture book to their children. The compared data from transcription of sessions revealed that the amount of one-word or two-word utterances and imperative and declarative ones along with prosodic feature (intonation) used by mothers depends on child semantic knowledge and age. Here declarative utterances were used the most and imperatives the least. The reasons to use different intonation referred to their age to draw their attention.

**Key words:** Child directed speech; shared reading; syntactic structure; prosodic feature; verbal interaction

## I. Introduction

Child directed speech is a fundamental factor in the language development of children. CDS is the register caregivers exploit to communicate with child. Infants are not born with adult-like language competency with which they can comprehend the meaning of the language their parents direct at them. Theories of language acquisition are based on four theories behaviorism, innateness, cognitive and interactionism. Skinner, behaviorist, believed in imitating of adults speech by child. He had some experiments on pigeons and generalized the finding to human beings. On the other hand Chomsky who believed in innateness, put a child's brain contains special language learning mechanism at birth and LAD. Piaget contended that Language is just one aspect of a child's overall intellectual development in cognitive theory. Another theorist

Bruner emphasized the interaction between children and their care-givers in interactionism. Bruner also coined the term Language Acquisition Support System or LASS in response to Chomsky's LAD. Skinner believed that children's language learning is a passive process of imitating the speech they hear in the environment, which is reinforced when they use it correctly and negatively reinforced when they use it in a wrong way. In contrast to Skinner, Chomsky proposed that children are innately pre-wired with a special language capacity which is a separate faculty that enables children to construct the rule systems of their native language. Jean Piaget sees Language acquisition as a product of general intellectual development rather than of separate language processing capacity. Social integrationist theory of language acquisition suggests that children acquire language through social interaction with the people in their environment, and the way adults talk impact on child language acquisition (Gleason, J. B., 1997)

Various scholars claimed the impact of caregiver's speech with child language developments. One of the caregivers is mother whose speech they uses to their children refers to CDS. According to Snow (1995, p. 452), the alterations parents make in the speech they use with their children (i.e., CDS):

. . . whether by adults or older siblings, differs from speech among peers on a variety of dimensions. It is syntactically simpler, more limited in vocabulary and in prepositional complexity, more correct, and more fluent . . . In other ways, though, CDS is still quite complex; it displays full range of conventional indirectness, for example, without the simplification of form-function one might expect (Shatz, 1978). While in general CDS is constrained to the hereand- now and related to the child's focus of attention or ongoing activity, a high proportion of at least some mothers' CDS redirects children's attention and activity, introduces non-present referents, and in other ways seems to complicate the task of learning language.

De Boysson-Bardies (1999, p. 81) explains the 'natural' concern that adults have for infants by stating that:

. . . [a]most all adults, no matter their sex or age, modify their way of speaking when talking to infants and very young children. Adults show a concern and a willingness to adapt to the capacities of the child by adjusting the register of their voices, adopting an affectionate tone, and articulating words clearly and more slowly.

Later she differentiated between motherese and baby talk:

motherese

. . . refer[s] to the modulations of the prosody and voice of mothers (or

other adults) speaking to babies, whereas baby talk indicates the simplification of vocabulary, syntax, and the forms of the words of the language addressed to a slightly older child, without, however, neglecting the modes of intonation that are associated with it. Whether peering into the infant's cradle or taking care of the baby, adults, when they speak, first attempt to establish affective contact and to elicit vocalizations (1999, p. 82).

Features of Child-directed speech:

- o Higher pitch and exaggerated intonation and stress
- o Repeated sentence frames
- o Repetition and partial repetition of adult's own words
- o Questions and commands
- o Frequent use of the child's name and an absence of pronouns (Durkin disputes this)
- o Absence of past tenses
- o A large number of one word utterances (holophrases)
- o Omission of inflections e.g. plurals and possessives
- o Fewer verbs, modifiers (adjectives in front of nouns) and function words (such as 'at' 'my')
- o Use of concrete nouns
- o Use of expansions – the adult fills out the child's utterance
- o Use of re-castings – baby's vocabulary put into a new utterance

*A. Studies of child directed speech*

Classic studies of child directed speech (CDS) adults speak to young children and found that it differed in important ways from the ways they speak to one another. When these adults speak to their young children they use a higher pitch and exaggerated intonation, they restrict the range of conversational topics they talk about, and they are highly selective in the words and syntactic

constructions they use Of special interest in these studies were the syntactic dimensions of CDS, since Chomsky (1965) and others had claimed that the linguistic structures children hear represent a very “impoverished” sampling of the full range of linguistic structures characteristic of adult syntactic competence. Results suggested that the truth of this claim depended on what was meant by “impoverished”. On the one hand, a number of studies suggested that adults’ speech to children contained fewer false starts and hesitations and was therefore more grammatically “correct” than speech between adults .

Much of the early work on CDS was also devoted to discovering whether and in what ways these linguistic adjustments for young children affected their language development. Most of the earliest studies used very global measures of the syntactic complexity of both CDS and the child’s later language development, for example, mean length of utterance or total amount of speech (Pine, 1994). Subsequent research identified many methodological and interpretive problems in looking for relationships between CDS and children’s language development (e.g., Gleitman, Newport, & Gleitman, 1975; Hoff-Ginsberg & Shatz, 1982), and other studies found that what is especially crucial is the discourse contexts in which children hear certain structures, for example, as recasts or expansions of their immediately preceding utterances (e.g., Barnes, Gutfreund, Satterly, & Wells, 1983; Hoff-Ginsberg, 1991).

What all of these studies suggest is that there may be close links between the way adults use particular syntactic phrases and expressions in CDS and the way children learn those same lexically specific phrases and expressions—much closer links than if syntactic constructions are defined in terms of abstract, adult-like syntactic categories and constructions (that may have no psychological reality for children just beginning to learn a language).

Previous research on mother–child interaction has documented vast individual and cross-cultural differences in the way in which mothers talk with their children. The amount of maternal talk and their conversational intentions have also been studied. Several within-culture works have identified a distinction between mothers who are more concerned with controlling and directing their children’s behavior and those who are more concerned with eliciting their children’s conversational participation (Halle & Shatz, 1994; McDonald & Pien, 1982).

### *B. Shared reading*

The home literacy environment has a crucial impact on young children's language and early literacy development. While the optimal age for initiation of shared reading is not known, studies have documented that shared reading as early as 6 months is associated with improved language development at 2 years and is predictive of later reading activities. Because of the importance of the home literacy environment, Reach Out and Read (ROR) was developed in order to use primary care pediatric visits to promote shared reading. A large number of studies have

documented the impact of ROR on parents' shared reading aloud and improved language outcomes in children. However, there has been limited study of factors related to initiation of reading aloud in infancy, and better understanding of these factors would help inform the implementation of this program.

Books can be a rich source of learning for children and adults alike. In the present study, the contribution of shared reading and parent literacy to a variety of child outcomes was tested. Child outcomes included measures of expressive vocabulary, morphological and syntax comprehension, and narrative ability (story grammar, cohesion, and language complexity) for book stories as well as personal stories.

## **II. Method**

### *A. Participants*

The participants of this study comprised of two groups: mothers and their children. In group one, the mother participated was thirty four, housewife, and educated in English translation major. Her child was 4year-old girl, who mostly played, talked, and communicated with her mother. The mother described the book in the kid's room at their home.

Group tow consists of a thirty-two-old mother who works in hospital, educated in nursing major. Her child was 2.5 boy who went to nursing school for two years nearly three days a week. He is naughty boy who played and talked and communicated with his mother, aunts, friends and caregivers. Like the first group, mother and kid were at their home.

### *B. Material*

In this study, two mothers were supposed to show and describe picture books, called "لی لی در سرزمین اسباب بازی", to their children. It was written by Mahmud Mirzaee delaviz for A&B children age. The subject of this book is training stories which contribute to train children social behaviors. This book was colored picture book in which there are little notes but lots of pictures, moreover, both children in this study drew no attention to written texts, but just to pictures.

### *C. Procedure and data collection*

Tow mothers' speeches were recorded in dyad sessions with their children. At the time of describing picture books to kids, the researcher who was absent in room but observe them thoroughly from other room, recorded their voice through cell phone, and observe their paralinguistic features(eye-contacts, gestures etc) the kids and mother shared. Immediately after

recording, the researcher transcribed the speech and count what needed for data collection. In order to determine the reliability of transcription, the researcher transcribed and counted the utterances. In 98% they agreed to each other, the rest of 2% was for the disagreement on determining utterances like "چه رنگی؟" in tow-word category or question category. The two transcribers had to be in agreement on 98 percent of the utterances. Reliability was based on accuracy of both utterance boundaries and word Transcription.

Researchers reviewed the transcriptions and coded each mother's utterances. The unit of transcription was the utterance, defined as any sequence of words that is preceded and followed by a pause, a change in conversational turn or a change in intonational pattern. They used the following target syntactic structure categories: one- word utterances, two-word utterances, imperative sentence, questions and declarative utterances along with prosodic feature(intonation). The exact percentages and probabilities were figured in tables of next secessions.

### III. Results and Analysis

Studies of child-directed speech (CDS) suggest that input to children is often simplified in terms of several aspects of the grammar, e.g. syntax, vocabulary, and phonetic/ phonological structure (Gallaway & Richards, 1994; Garnica, 1977; Snow, 1972). The simplified input is thought to facilitate learning and to help children make progress in their acquisition by maintaining their attention and engaging them in meaningful communication. CDS is also thought to vary depending on the age of the child, gradually giving way to more mature speech styles over time (Bellinger, 1980; Garnica, 1977).

In this study , The frequency of use of the syntactic structure are divided by the total number of coding for the mother utterances during the sharing reading session and multiplied by 100. To examine the amount of variation among parents in the child-directed speech they offer their toddlers. Descriptive statistics for child-directed speech measures are presented in Tables.

TABLE 1. Percentage and probability of occurrence of utterances in mother speech of first group

Categories	number	percentage	probability
One word	23	18.25	0.18
Two word	6	4.76	0.04
Imperative	3	2.38	0.02

Declarative	56	44.44	0.44
Intonation	38	30.15	0.30
<b>Total</b>	<b>126</b>	<b>100</b>	<b>1</b>

Group 1 feature : the Mother in this group, whose kid was boy at the age of 2; 5, employed declarative utterances more than the second mother. Here the intonations (higher pitch and exaggerated intonation and stress) were for questions and sentences to motivate the kid to look at the picture; she used intonation for questions and showing the pictures to attract his attention, since the boy was so naughty and didn't pay attention to books as carefully as the mother 2's daughter. Here the mother used one-word utterances for praising and naming entities. Due to his age, the kid had lack of lexicon in comparison to the girl.

TABLE 2. Percentage and probability of occurrence of utterances in mother speech of second group

Categories	number	percentage	probability
One word	18	16.66	0.16
Two word	6	5.55	0.05
Imperative	5	4.62	0.04
Declarative	47	43.51	0.43
Intonation	32	29.62	0.29
<b>Total</b>	<b>108</b>	<b>100</b>	<b>1</b>

Groups 2 feature: As the table reveals, the second mother whose kid was a 4 year girl, described the pictures and asked questions for clarification and drew her to participate in the process. Compared to mother 1, she exploited more imperative like "بگو" , and "نشون بده". Here again the one-word utterances were used for praising of kid's correct answer. She didn't use exaggerated intonation; nevertheless she employed smooth and harmonic voice.

The following Bar graphs precisely show the differences between these two groups:

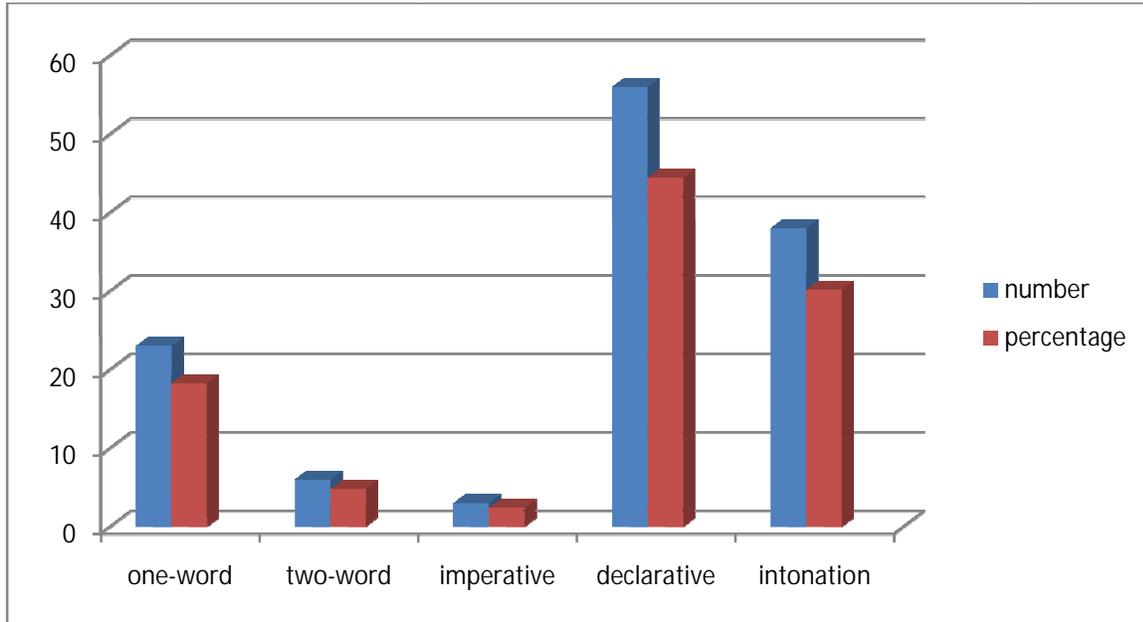


Figure 1. The Bar graph of group 1

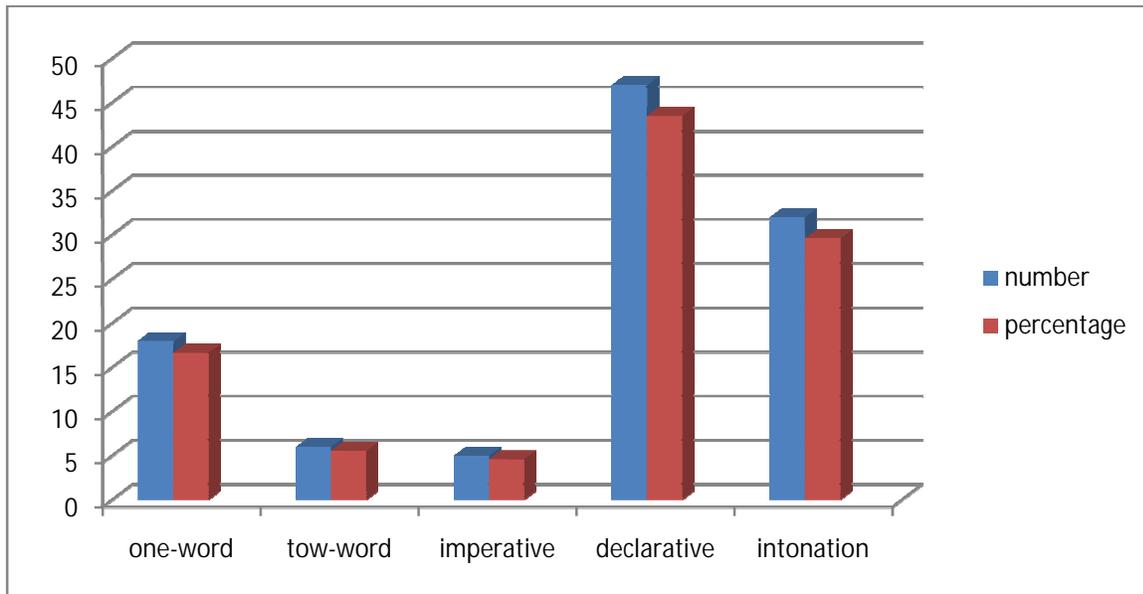


Figure 2. The Bar graph of group 2

Comparison of two tables revealed that mothers employed declarative syntactic structures, then rising intonation as questions and changing the pitch to make the description interesting. All of them knew that their children didn't like imperatives, as we can see, the number of occurrences were so low in two groups.

### **Conclusion**

The researcher in this study sought to examine mothers' speech addressed to their children, in two different ages, while shared reading. She wished to find out the pattern of structure and prosodic use and also to see whether there are similarities or differences among mothers speech. Mothers utterances were analyzed to see what structures and prosodic features they used most, least or often. The findings suggest that the most structure used by mothers of 2.5age was declarative utterance and the least one was imperative .for the children of 3.5-4age, mothers used again declarative the most and imperative the least. At the next stages, the number of intonation had the second position. However, the 4-year-old kids' mothers used more complete and complex sentences than 2.5-old kids' mothers. Not surprisingly, parents who talked more produced more word types, had higher levels of lexical diversity and produced longer utterances (MLU) with their toddlers. Specifically, parents who used a larger proportion of their utterances to direct their child's behavior produced fewer word tokens, and produced less diverse vocabulary than parents who used fewer of their utterances to direct their child's behavior.

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