Preschool Teacher Talk: How Much Complex Syntax is in There?

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INTRODUCTION

Preschool classrooms offer a rich learning environment that can promote language skills necessary for literacy. Preschool teachers play a critical role in providing language input and models for the students. Much of the language emphasis in preschool classrooms is on vocabulary (e.g., what teachers say and books read to children). Language competence encompasses much more than vocabulary. Syntax, specifically complex syntax, may be just as important as vocabulary.

Proficiency in complex syntax allows children to engage in verbal dialogue and to comprehend high-level text that is critical to learning (Jackson & Roberts, 2001). Complex sentences contain two or more clauses. Clauses are joined within a single sentence through coordinate (e.g., *and*) or subordinate (e.g., *because*) conjunctions or through embedding (e.g., *I know what you did*; Bloom, Tackeff, & Lahey, 1984; Quirk, Greenbaum, Leech, & Svartvik, 1985).

Our work with complex syntax production in spoken language samples has focused on differentiating between complex sentences and complex syntax. Sentences are clearly the unit of written language, but utterances are the unit of spoken language. In spoken language, dependent clauses can be produced in full sentences or in utterances which include only the dependent clause. In the latter instance, the main clause is not produced in the utterance with the dependent clause due to conversational expectations. For example:

> Speaker 1: *Why are you going to the store?*
> Speaker 2: *Because I need to buy some new clothes.*
> NOT
> Speaker 2: *I am going to the store because I need to buy some new clothes.*

In our lab we have identified 13 types of complex syntax which account for more than 95% of complex syntax produced by young children. These complex syntax types are coded whether or not the main or independent clause is part of the utterance.

Huttenlocher and colleagues (2002, 2008) reported that children from low socioeconomic status (SES) families are less proficient in complex syntax production than peers from families of higher SES. They attributed this difference to variations in parental complex syntax input. Given these findings, we sought to explore the complex syntax input children from low SES families receive in their preschool classrooms. This study is a preliminary exploration of the complex syntax produced by Head Start teachers. We also investigated the talk function of Head Start teacher utterances that included complex syntax.

PARTICIPANTS

Teacher Participant	Gender	Education	Experience	Classroom Activity
1	Male	High School Diploma	7 Years	Art
2	Female	Bachelor's Degree	8 Years	Dramatic Play

METHODS

Procedure

Each teacher was video recorded for 20-30 minutes during an art or dramatic play activity. For preliminary analysis 10 minutes of each video sample was used. Teacher talk was transcribed and coded for 13 types of complex syntax (see Table 1) and 16 types of teacher talk function (see Table 2).

Data Analysis

Analysis of language samples for complex syntax and teacher talk function was coded in Systematic Analysis of Language Transcripts (SALT; Miller & Chapman, 2010). The first author prepared initial transcripts and coding, which were then checked by the second author. Disagreements were resolved by consensus. Descriptive statistics were calculated for each participant.

Table 1. Complex Syntax Types (Schuele, 2009)

Complex Syntax Type	Code	Example
Let's Clause	LC	Let's watch the bird.
Reduced Infinitive	CAT	I wanna watch the bird.
Marked Infinitive	SI	I want to watch.
Unmarked Infinitive	UIC	He made the bird eat.
WH Nonfinite Clause	WNFC	I know what to eat.
WH Finite Clause	WFC	I know what he eats.
Clausal Complement	FPC	I know (that) the bird eats here.
Nominal Relative	NRC	This is where the bird eats.
Subject Relative	SRC	The bird that landed flew away.
Other Relative Clause	RC	The bird (that) I saw flew away.
Participle Clause	PC	Birds flying in the air are neat.
Coordinate Clause	CC	The bird landed and ate the worm.
Subordinate Clause	SC	The bird ate when he landed.

Table 2. Teacher Talk Function Types (Dickinson, 2010)

Talk Function	Code	Talk Function Definition
Ask for an action	ASKA	Question or command which requests that child or children do something, gives instructions or directions.
Attention-getting	ATTN	Question or statement which calls/directs attention to the speaker, or gives/acknowledge attention to another speaker.
Choral response	CHOR	Group response in unison, recitation of known text, poem, song, or saying.
Clarification request	CLAR	Comment or question that reveals a failure to understand or hear, and a request for the speaker to repeat or rephrase what was just said.
Controlling	CONT	Question, statement or response, which seeks to control contingent actions, behaviors, or responses.
Correcting	CORR	Question, statement, or response contingent on previous utterance, which corrects it in terms of factual information.
Evaluating	EVAL	Question, statement, or response, which encourages or provides evaluation.
Expanding	EXPD	Rephrase with slight correction or expansion.
Explaining	EXPL	Questions, statement, or response, which solicits, elicits, or provides an explanation—such as a motivation, cause, or process.
Give information	GIVE	Statement that describes a situation, communicates an idea, experience, or opinion.
Inaudible	INAUD	Either entire utterance is unintelligible, or part is unintelligible and therefore function is unclear.
Known-answer question	QUKN	Question or request for information where the speaker knows the answer, is looking for a specific response.
Rhetorical question	QURH	Question used with the intent of making a point indirectly.
True question	QUTR	Question or request for information where the speaker does not know the answer; no one 'correct' answer.
Repeating	REPT	Direct echo or repetition of part or all of previous utterance.
Responding	RESP	Statement that responds to a question, inquiry, or fill-in-the-blank.

RESULTS

Teacher 1: Art

Talk Function	Infinitive				Embedded							Combining		OTHER	TOTAL Complex Types	# of Utt. Talk Function
	LC	CAT	SI	UIC	WNFC	WFC	FPC	NRC	SRC	RC	PC	CC	SC			
ASKA	1	3	4					1		2	1	2	4		18	14
ATTN															0	0
CHOR															0	0
CLAR															0	0
CONT	2		3									1	1		7	5
CORR															0	0
EVAL															0	0
EXPD															0	0
EXPL			1									2			3	1
GIVE		3	3		1					1		2	1		11	7
INAUD															0	0
QUKN															0	0
QURH															0	0
QUTR		5	3									1			9	6
REPT															0	0
RESP															0	0
TOTAL	3	11	14	0	1	0	0	1	0	3	1	6	7	1	48	33

Teacher 2: Dramatic Play

Talk Function	Infinitive				Embedded							Combining		OTHER	TOTAL Complex Types	# of Utt. Talk Function
	LC	CAT	SI	UIC	WNFC	WFC	FPC	NRC	SRC	RC	PC	CC	SC			
ASKA	2		3					1							6	5
ATTN															0	0
CHOR															0	0
CLAR															0	0
CONT															0	0
CORR															0	0
EVAL															0	0
EXPD															0	0
EXPL		3	1					1		1			1	5	12	7
GIVE		3											2		5	5
INAUD															0	0
QUKN															0	0
QURH		2	1								1		1		5	4
QUTR		3	3			1				1			2		10	9
REPT															0	0
RESP															0	0
TOTAL	2	11	8	0	0	1	0	2	1	1	1	5	6	0	38	30

VARIABLE	TEACHER 1: Art	TEACHER 2: Dramatic Play	Mean
Total Number of Utterances	126	155	140.5
Total Number of Utterances with Complex Syntax	33	30	31.5
Percent of Utterances with Complex Syntax	26%	19%	23%
Number of Types of Complex Syntax Produced	10	10	10
Total Complex Syntax Tokens	48	38	43
Percent of Complex Syntax Produced: Infinitive	58%	55%	57%
Percent of Complex Syntax Produced: Embedded	13%	16%	15%
Percent of Complex Syntax Produced: Combining	27%	29%	28%
Number of Types of Teacher Talk Function	5	5	5
Total Teacher Talk Function Tokens	33	30	31.5

DISCUSSION

On average only 23 percent of Head Start teachers' utterances involved complex syntax. The two teachers overwhelmingly used infinitive types more than any other type of complex syntax. When complex syntax production was examined by activity, there was little difference between the art and dramatic play activity.

The two Head Start teachers each used five different types of teacher talk function. For Teacher 1 these included: (a) ask for an action, (b) controlling, (c) explaining, (d) giving information, and (e) true question. Most of Teacher 1's complex syntax utterances were asking for an action (14 utterances). Teacher 2's teacher talk functions included: (a) ask for an action, (b) explaining, (c) giving information, (d) rhetorical question, and (e) true question. Most of Teacher 2's complex syntax utterances were true questions (9 utterances).

Overall, these preliminary findings suggest that the language input available to Head Start children is limited in terms of complex syntax. Our observations of these samples indicated that teachers are focused on the completion of the activity and controlling student behaviors, and therefore, are missing opportunities to provide rich language input to their students. Our next step is to analyze additional teacher data from two cities (Cincinnati and Nashville). If these preliminary findings are representative of our entire sample, we would argue that Head Start teachers need to provide more diverse complex syntax input in order to provide input that might influence the development of preschool children from low SES families (Vasilyeva et al., 2008).

Future Directions:

- Complete analysis of teacher samples from two cities.
- Analyze complex syntax production in pre-post samples of teachers who participated in a study to diversify vocabulary used in teacher talk.
- Compare teacher talk in classrooms of preschool educators with varying educational backgrounds and with varying child characteristics.
- Consider implications of findings for enhancing the preschool classroom language environment.

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