

DEVELOPMENTAL SENTENCE SCORING OF A FIVE YEAR OLD GIRL

GIRIJA NAGARAJA

Transcribed tape recordings of the spontaneous speech of a five year old girl have been scored according to Laura Lee and Susan Canters' Developmental Sentence Scoring (DSS) technique. Enyde's DSS score was compared with others of her age group in Laura Lee and Susan Canters' study.

Recent studies of language acquisition among normally developing children have given a new impetus to research in communicative disorders. Developmental Sentence Scoring (DSS) as illustrated by Laura Lee and Susan Canter (1971), is a clinical procedure for estimating the status and rate of progress of children enrolled for language training in a clinic. It is based upon a developmental scale of syntax acquisition which shows the general order in which normal children achieve particular syntactic structures. By analyzing a child's spontaneous, tape recorded speech sample, a clinician can estimate to what extent the child has generalized the grammatical rules sufficiently to use them in verbal performance. With such a guide a clinician could plan lessons which would present these structures in a presumably developmental sequence, thereby introducing grammatical complexity in systematically graded steps.

DSS is a clinical procedure for analyzing verbal performance and planning appropriate remedial measures. It evaluates a child's performance, his use of grammatical rules in spontaneous speech, and measures the child's grammar against adult standard English. It gives weighted scores to a developmental order of pronouns, verbs, negatives, conjunctions, yes-no questions and wh- questions. The mean score per sentence estimates the child's ability to formulate sentences with a high grammatical 'load'.

Conversational speech places a grammatical 'load' upon a child's performance which cannot be evaluated by selective testing. The clinicians need something more than standardized tests to evaluate a child's consistency and frequency of usage and his ability to combine many transformations into a single sentence in spontaneous speech. Therefore, a clinical procedure such as the analysis of a speech sample may yield more useful information to a clinician than does traditional testing.

Enyde, five years old at the time of this recording was judged a normally developing child by her family, friends of her family and by the author. Enyde and her mother looked at pictures and toys and engaged in conversation. Enyde spoke with spontaneity but she had to be prompted with questions to elicit speech.

A sample of fifty complete, consecutive, intelligible, non-echolalic sentences were elicited from Enyde in conversation with her mother and with the author in different contexts.

Mrs Girija Nagaraja, M.Sc, M.A., Queens College, New York.

A structure is not given a score unless all the required syntactic and morphological rules have been observed. To be judged complete, sentences must have at least a noun and a verb in subject-predicate relationship. Individual scores for the fifty sentence speech sample are totaled and the mean score per sentence is derived. This score is called the Developmental Sentence Score (DSS).

Echolalic utterances are omitted from the sample since they are not spontaneously formulated. Some of the utterances are excluded from the sample since they could not be clearly understood, some because of poor articulation and some because of interference from environmental noises. Some of the sentences which are similar are included in the sample since they are elicited in different contexts.

After the above omissions had been made, fifty sentences of Enyde's utterances remained.

DEVELOPMENTAL SENTENCE SCORING

Indefinite Pronouns or Noun Modifiers: (Indef. Pron.)

Score for each word	Words Used	Total Score
1.	it, this, that.	3
2.	no, some, one, two, other, more.	12
3.	somebody	3

Personal Pronouns: (Persn. Pron.)

1. First and Second Person:	I, me, my, mine, you	5
2. Third Person:	he, him, his, she, her	10
3. Plural Pronouns:	we, they, them, us, their	15
5. Reflexive Pronouns:	myself	5
6. Wh.-Pronouns:	what, that, which	18

Main Verbs: (Primr. Verb.)

1. is	1
2. is+verb+ing	2
3. gives, picked, has, had	12
3. went, broke	6
3. am, are, was	9
4. can, will, have	12

Secondary Verbs: Early developing infinitival complements

1. I want to buy a Christmas dress.	1
1. I have to make one.	1
1. I am going to put it on the table.	1

<i>Negatives: (Neg.)</i>	Total Score
2. can't, don't _____	4
3. isn't _____	3

<i>Conjunctions: (Conj.)</i>	
1. and _____	1
2. but _____	2
3. because _____	3
4. So _____	4
6. why, for, that, than _____	24

<i>Sentence</i>	<i>Indef. Pron.</i>	<i>Persn. Pron.</i>	<i>Primr. Verb.</i>	<i>Secon. Verb.</i>	<i>Neg.</i>	<i>Conj.</i>	<i>Sent. Pt.</i>	<i>Total</i>
1. She is talking to a man		2	2				1	5
2. Little boy and girl are going outside			3		1		1	5
3. Because he has allergy		2	3				1	6
4. I don't know		1	1		2		1	5
5. He is reading a paper		2	2				1	5
6. She is pushing her chair backward with her back		2,2,2	2				1	9
7. He is reading a paper and drinking coffee		2	2			1	1	6
8. Then he went to sleep		2	3				1	6
9. Mother picked her up on her lap		2, 2	3				1	8
10. I want to buy a Christmas dress and Christmas toys		1	1	1		1	1	5
11. My father is a Santa Claus		1	1				1	3
12. I have to make one	1	1	4	1			1	8
13. So, I am going to put it on the table	1	1	3	1			1	7

<i>Sentence</i>	<i>Indef. Pron.</i>	<i>Perm. Pron.</i>	<i>Primr. Verb.</i>	<i>Secon.Neg. Verb.</i>	<i>Conj.</i>	<i>Sent. Pt.</i>	<i>Total</i>
14. Because Kenyan take the bulb off and break them		3	0		0,1	0	4
15. He isn't a baby		2	1	3		1	7
16. I want to be bigger than Carrie		1	1	1	6	1	10
17. I go to school by myself		1, 5	1			1	8
18. That is why I go home with her		1, 2	1		0	1	5
19. Because her father and mother go to work		2	1		0,1	1	5
20. I gave my ties to Kenyan and my pants to Kenyan		1, 1, 1	3		1	1	8
21. I drew it	1	1	3			1	6
22. I wrote a star on it and put scratch things on it	1, 1	1	3, 1		1	1	9
23. I put it on radia- tor so it can dry so it will fall off	1,1,1	1	1		4,4	1	14
24. I made a book		1	3			1	5
25. I going to leave it in school	1	1	0			0	2
26. I don't know what it is about	1	1,6	1	2		1	12
27. I put a record on the record-player		1	1			1	3
28. She gave me a bubblegum		2,1	3			1	7
29. We had a Christmas party		3	3			1	7
30. We play games		3	1			1	5
31. I don't have enough people		1	1	2		1	5
32. I play with my friend		1,1	1			1	4
33. But she is bigger than me		2,1	1		6	1	11
34. They cover their eyes		3,3	1			1	8
35. She is going to some place	2	2	2			1	7
36. They are playing with the cat		3	3			1	7

<i>Sentence</i>	<i>Indef. Pron.</i>	<i>Persn. Pron.</i>	<i>Primr. Verb.</i>	<i>* £</i>	<i>Ne_{g.}</i>	<i>Conj.</i>	<i>Sent. Pt.</i>	<i>Total</i>
37. He dropped some blocks on his head	2	2,2	3				1	10
38. She is taking a toy carriage with a doll in it.	1	2	2				1	6
39. She made a picture		2	3				1	6
40. A girl sewing the dark clothe			0				0	0
41. He put his hands on the radiator and it burnt him	1	2,2,2	1,3			1	1	13
42. She is playing with her jewelry		2,2	2				1	7
43. He is sucking his lollipop		2,2	2				1	7
44. She is pouring tea		2	2				1	5
45. He can't paint		2	1		2		1	6
46. They are pulling each other	2,6	3	3				1	15
47. That is a truck with sand on it	1, 1		1				1	4
48. It is a clock	1		1				1	3
49. A policeman telling them which way to go		3, 6	0				0	9
50. He is sweeping the ground		2	2				1	5
Grand Total	26	123	90	4	17	22	46	328

Enyde's DSS Score— $328/50=6.56$.

Note: Since Enyde did not get any scores in Interrogative reversal and Wh-Question, those two columns are not shown above.

Recognizing the value of a warm-up period, only the last 50 sentences that Enyde formulated were selected as the corpus to be scored.

Enyde got a Developmental Sentence Score (DSS) of 6.56 which is the mean sentence score.

The individual sentence score increases as more transformations are added to the same kernel. In this case, the individual sentence score has increased to a maximum of 15. Enyde's sentences are simple, they do not have transformations which decreases the individual sentence score. She did not make high level

grammatical sentences. She did not formulate interrogative reversals and Wh-Questions, which reduced the score.

Of all the different scored items, personal pronouns get a highest score of 123. Many considerations go into proper pronoun selection; person, number, gender, and case. Occasionally, children make errors of gender and person.

Of the 50 sentences scored, only four sentences failed to get a sentence-point, since they were not grammatically correct. This indicates that Enyde has the ability to formulate simple sentences without grammatical errors.

Enyde's DSS of 6.56 is comparable to the 10th percentile of DSS of 6.80, as indicated in Laura Lee and Susan Canters' chart (1971) showing percentiles of DSS scores of 160 children by six-month age groups, (6.80 for the age group of 5.0 to 5.5 years). Further, it could be estimated from the above, that Enyde is progressing at a normal rate.

It is to be noted that this was the first recorded speech sample of Enyde and her score of 6.56 may hence be considered as a tentative estimate of her syntactic development. However, if some more speech samples are recorded successively, Enyde's DSS score may further improve.

Since Enyde did not formulate any interrogative reversals and Wh-Questions, lessons could be planned on these. The children's first questions are indicated by a rising intonation on declarative statements, but they are scored as incorrect questions. In this case, Enyde is to be taught that the question transformation requires the reversal of the subject with the first auxiliary verb.

Normally, the child first learns the set of Wh-words by hearing his mother replace parts of his own sentences which she did not understand. The child himself does not compose such sentences, but through hearing them he learns which part of a sentence each Wh-word replaces. Later, he recognizes the privilege of occurrence of the Wh-word, which is always first in the sentence. Enyde is to be taught these two above mentioned rules in forming Wh-Questions.