

Coherence and cohesion in the narratives of German children with specific language impairment

A question of either / or ?

-work in progress-

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Abstract:

Oral narrative skills not only constitute a large component in everyday communication but they are also very important for children's success in school. However, telling stories can still be a challenge for some children, in particular for children with specific language impairment (SLI) (McFadden & Gillam 1996, Botting 2002, Norbury & Bishop 2003). Colozzo et al. (2011) found that children with SLI often produce stories either with an interesting content along with many grammatical errors or with a poor content and hardly any grammatical mistakes. The first part of my dissertation concerns the development of a German test which examines content, coherence and cohesion of oral production of stories in children age 6 to 11. The second part studies these skills in school-age children with and without language impairment. First results indicate that the content measured by story grammar components seems to be independent from coherence and cohesion. While children without SLI show a balanced pattern of narrative skills, children with SLI seem to have problems with coherence and/or cohesion and/or frequency of grammatical errors. These preliminary findings of three different subgroups among the children with SLI may be related to an underlying processing deficit; these findings need to be examined with a larger group of subjects.

Literature:

Botting, N. (2002). Narrative as a tool for the assessment of linguistic and pragmatic impairments. *Child Language Teaching and Therapy* 16, 1-21.
Colozzo, P. et al. (2011). Content and form in the narratives of children with specific language impairment. *J. Speech Lang Hear Res* 54,1609-27.
Johnston, J.R. (2008). Narrative: 25 years later. *Topics in Language Disorders*. 28 (2), 93-96
McFadden, T.U. & Gillam, R. (1996). An Examination of the Quality of Narratives Produced by Children With Language Disorders. *Language, Speech and Hearing Services in Schools* 27, 48-56
Norbury, C.F. & Bishop, D. V. (2003). Narrative Skills of Children with Communication Impairments. *International Journal of Language and Communication Disorders* 36, 287-313
Pfeffer, K. (2011). Test sprachlicher Fähigkeiten in Erzählungen. Präsentation Oberseminar LMU

Background

Oral text production is a bigger challenge than the production of single sentences. Especially children with SLI have difficulties constructing the content of a story and/ or using the appropriate linguistic devices to do so (McFadden & Gillam 1996, Botting 2002, Norbury & Bishop 2003). These skills are not only important in everyday life but also at school (Johnston 2008).

To tell a good story children need ...

- to know what they want to talk about
- to select the most important facts
- to know how to organize their narratives (macrostructure)
- to connect the different parts of their story in a coherent way (coherence)
- to have the linguistic skills to verbalize the content and coherence properly (cohesion)

Colozzo et al. (2011) found that children with SLI tell stories either with an interesting content but with many grammatical errors or with a poor content and hardly any grammatical mistakes.

Aim

My dissertation consists of two parts:

1. The development of a diagnostic instrument to evaluate oral narrations of school-age children.
2. A study concerning the relationship between different language deficits and their effects on oral storytelling.

Pilot Study

To find out which features of narrative language need to be evaluated and to develop the narrative test a pilot study was conducted.

- 12 children with and without SLI
- age 5-11
- 1 retell story, 1 picture story, 1 single picture
- informal analysis and interpretation

A combination of retelling and picture stories was found to be most appropriate for the test on narrative competence.

The evaluation was based on content (story grammar structure and measures like correct order and tense) on the one hand and form (sentence complexity and grammaticality) on the other. However, in the course of the analysis this differentiation proved not to be sufficient. Coherence and cohesion have to be examined in more detail.

Main Research Questions

- Is the dissociation of form and content in stories of English-speaking SLI children also found in German children with SLI?
- Does the pattern also hold for typically developing children?
- Is there a relationship between different kinds of deficits in narratives (macrostructure, coherence or cohesion) and different language deficits (semantics, syntax, morphology)?
- Which role does processing capacity play?

Method

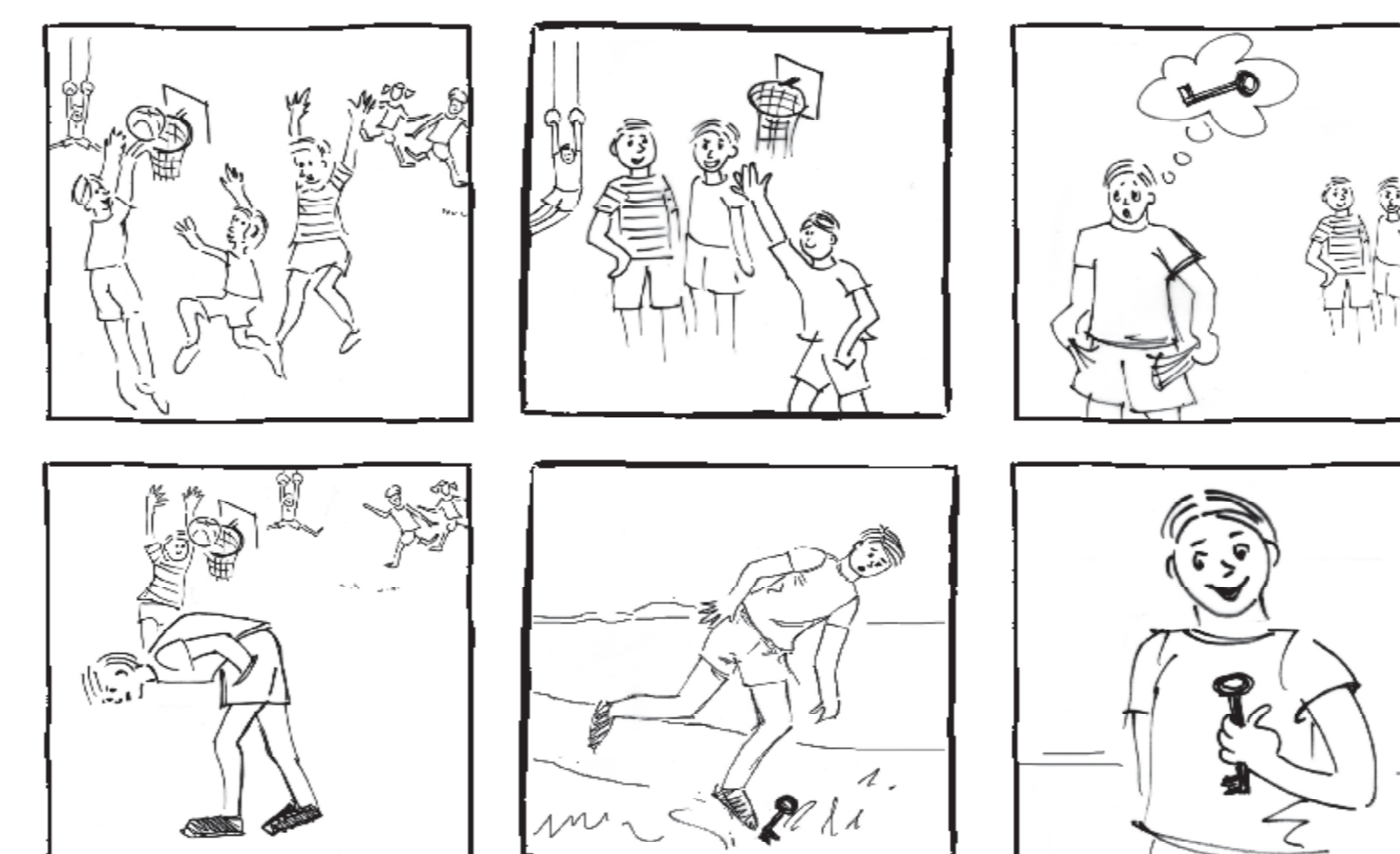
So far 10 children with and 20 without SLI, age 9-11, have been tested with the new test on oral narration (described in the next paragraph) and subtests of different standardized tests of language.

The evaluation contains measures on...

- content (macrostructure), coherence, cohesion and grammaticality of stories (Pfeffer 2011) (NARRATION)
 - sentence repetition (HSET; Grimm & Schöler 1991) sentence composition (SET 5-10, Petermann 2012) (GRAMMAR)
 - expressive vocabulary (WWT 6-10; Glück 2006) (LEXICON)
 - digit span (K-ABC, Kaufmann 1991) (SHORT TERM MEM.)
- Each child was taken out of his/her class twice: once for the test on narration, once on the following day for the other tests.

Test of Narration

- 1.) - Practice retell story
 - Retell 1 + questions: 2 protagonists, 1 episode
 - Retell 2 + questions: 2 protagonists, 2 episodes
- 2.) - Practice picture story
 - Picture story 1 + questions: 2 protagonists, 1 episode
 - Picture story 2 + questions: 2 protagonists, 2 crossing episodes



Test evaluation:

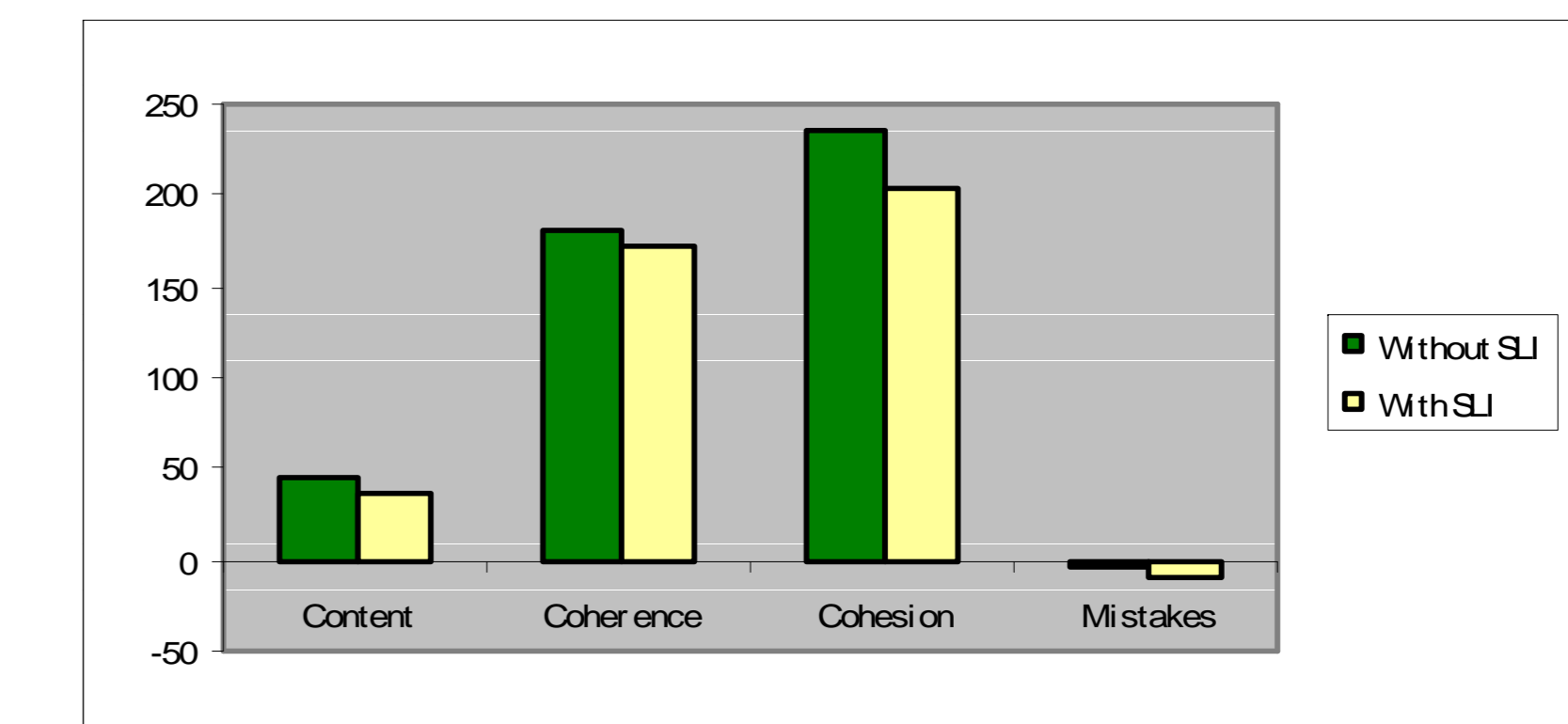
Content (macrostructure)	Story Grammar: setting, initializing event, internal response, (internal plan), attempt, direct consequence, reaction
Coherence	pronominal reference, temporal structure, logical structure, first mentions
Cohesion	sentence structure, connectors, grammatical mistakes

Preliminary Results I

children	IQ	Vocabulary	Short-term memory	Processing capacity	Grammar
without SLI	114,75	33,15	14,7	11,75	32,45
with SLI	99	25,33	13,41	9,83	24,5

- lower expressive vocabulary skills, grammatical skills and scores in processing capacity in children with SLI
- almost no difference in short term memory

Preliminary Results II



Content, coherence, cohesion and grammatical mistakes in narratives of children with and without SLI

Without SLI	Content	Coherence	Cohesion	Grammatical mistakes	Overall
Retell	23	93,05	135	-3,84	247,21
Picture	22,52	86,73	104,36	-1,58	212,05
Both	45,52	179,89	234,89	-5,21	455,11

- content (Story Grammar): almost no differences between picture and retell stories
- coherence and cohesion: lower scores in picture stories
- more grammatical mistakes in retells

With SLI	Content	Coherence	Cohesion	Grammatical mistakes	Overall
Retell	20,8	91	109,5	-4,2	217,1
Picture	17,9	82,5	94,1	-4,2	190,3
Both	37,7	173,5	203,6	-8,4	406,4

- higher scores for content, coherence and cohesion in retell stories in comparison to picture stories
- problems especially with time, reference and connectors

First Conclusions

Concerning the tables above you can see that the typically developing children achieve better results in the narrative tasks than the children diagnosed for SLI. They also perform better in the vocabulary, syntax and morphology test and the test of processing capacity. All of these factors may influence narration. Taking a closer look at the individual results (without statistical analysis) it can be seen that both children with and without SLI display worse results in narration when there is a deficit in processing capacity. As the biggest difference between children with and without SLI appears to be in cohesion this seems to be the biggest challenge for children with SLI. Children with high scores in cohesion also seem to make more grammatical mistakes than children with lower scores in cohesion. This result is consistent with Colozzo et al. (2011). But, in contrast to Colozzo et al. (2011), no dissociation between form and content was found. The factor content (story grammar) seems to be independent from the factors coherence, cohesion and grammatical errors. A possible reason may be that Colozzo et al. did not differentiate between content, coherence and cohesion, but only between content and form. It can be seen that typically developing children either struggle with both coherence and cohesion or with none whereas children with SLI tend to be more successful in either coherence or cohesion. This may indicate that a limited processing capacity is one of the main reasons for problems in oral narration. But all of these results have to be studied with more subjects and have to be analysed statistically.