Academic Language Competencies of Primary School Children: Comprehension of Clause Connectors

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Theoretical background

The mastery of academic language is considered to be an important precondition for academic success (Gogolin, 2009). Academic language is assumed to have a more complex grammar and a more demanding vocabulary than everyday language (Bailey & Butler, 2003). It is *"the register of language that children acquire in school and which they need to use effectively if they are to progress successfully through the grades"* (Cummins, 2003, p. 323).

Typical features of academic language are the use of passive voice, nominalisations, many subordinate clauses and specific, often abstract vocabulary. The characteristic complex sentence structure (Bailey & Butler, 2003) is formed inter alia by the use of clause connectors (e.g., *after* [temporal], *therefore* [causal], *although* [concessive]).
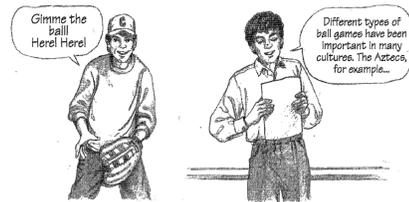

Fig. 1: Conversational vs. academic language (Chamot, & O'Malley 1994, p. 40)

Especially for children with migration background gaining academic language proficiency seems to be a highly demanding challenge (Bailey, Butler, LaFramenta, & Ong, 2004). In Germany, only insufficient data exists concerning the question to which extent primary school children possess competencies in academic language. The present study is designed to contribute to this question.

Research questions

The aim of the study is to examine whether clause connectors that are characteristic features of academic language cause major problems for primary school children, especially for children with migration background, when processing complex sentences.

Differences between children with various linguistic family backgrounds as well as differences between various groups of clause connectors will be examined.

The long-term objective of the project is to investigate different indicators of academic language proficiency of primary school children (e.g., comprehension of academic texts, lexical knowledge) and to develop a standardized instrument to assess children's competencies in academic language.

Method

In order to measure children's comprehension of clause connectors, two sentences were constructed for each connector: a semantically consistent and a semantically inconsistent one. The task was to listen to the sentences presented in a randomized order and to identify after each sentence if it was meaningful or meaningless.

	monolingual German speaking children	multilingual / foreign language speaking children
	524 (45,6%)	624 (54,4%)
♂	272 (23,7%)	326 (28,4%)
♀	250 (21,7%)	298 (26,0%)
2nd grade	282 (24,6%)	306 (26,6%)
3rd grade	242 (21,1%)	318 (27,7%)

Tab. 1: Sample description (N = 1148)

„Finja hat Durst. *Daher* kauft sie sich in der Pause einen Saft."

[„Finja is thirsty. *Therefore*, she buys a juice during school break."]

„Irina hat den Bus verpasst. *Daher* kommt sie pünktlich in der Schule an."

[„Irina missed the bus. *Therefore*, she arrives at school in time."]

54 connector items along with several control measures (e.g. basic lexical knowledge and grammar comprehension) were administered in the study. The scoring of the clause connector items was carried out with item pairs, i.e. items containing the same connector were treated as a unit.

Results

An analysis of variance of the item units indicates that children from German-speaking families show a significantly better performance than those from multilingual / foreign language speaking families. However, this group difference only applies to temporal ($F(1,1108) = 19.17$, $p < .001$, $\eta_p^2 = .02$) and causal ($F(1,1108) = 19.18$, $p < .001$, $\eta_p^2 = .02$) connectors as there is no significant difference between monolingual German speaking and multilingual / foreign language speaking children when sentences contain concessive connectors ($F(1,1108) = 0.87$, *n.s.*; see Fig. 2).
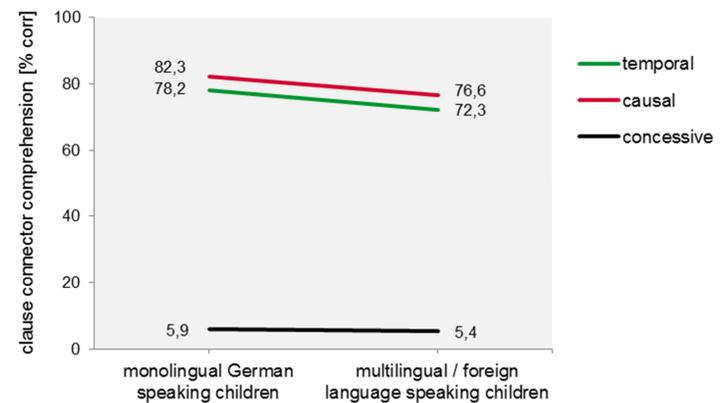

Fig. 2: Group differences related to linguistic background and connector group

The main differences appear between the different types of clause connectors [temporal vs. concessive items: $t(1113) = 90.4$, $p < .001$; causal vs. concessive items ($t(1113) = 97.0$, $p < 001$].

Discussion

The relatively small effect of the analysis of variance indicates that there might not be a substantial difference between monolingual German speaking and multilingual / foreign language speaking children.

However, results show that concessive connectors seem to cause major problems regardless of the students' linguistic background as the mean values in that item group are substantially lower than in temporal or causal items. This might suggest that the acquisition of concessive connectors presupposes different skills than temporal or causal connectors.

Another supposition explaining the vast performance difference between temporal and causal connectors on the one hand and concessive connectors on the other hand is that the children may have focused mainly on the context of the sentence while ignoring the included connector, thereby using a semantic strategy. This would lead to a high performance in temporal and causal connectors, but to a low outcome in the concessive ones. The semantically consistent example (see "Method") illustrates this effect:

When hearing the item the children would only pay attention to the coherence of "*being thirsty*" and "*buying a juice*". With the connector "*therefore*", this would lead to a correct answer whereas the same sentence with the connector "*however*" would be answered incorrectly.

Further analyses are needed to examine the actual reason that stands behind the performance differences related to the connector group.

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