

STORY GRAMMAR: EVIDENCE FROM BILINGUAL CHILDREN

Andreou Maria
University of Cologne
Germany
mandreou@uni-koeln.de

ABSTRACT

The present study aims to examine if there is a bilingual advantage in the measure of story grammar. Studies so far have shown that bilingual children perform similarly in their L2 compared to monolingual children in a number of measures including story grammar. This study consists of 50 Greek-Albanian children and 50 Greek monolinguals which were between the ages of 8 and 12, with Greece as their area of residence. The story grammar was measured in the context of a narrative elicitation task, while at the same time a number of screening tasks were taken into account such as home language history and current language use via questionnaires, proficiency and updating skills. The results revealed an advantage of bilingual children compared to their monolingual peers on the measure of story grammar. It was also found that updating skills were the most significant predictor of the story grammar. This leads to the conclusion that story grammar is not language specific. This finding suggests that when bilingual children deal with discourse representation without focusing on linguistics features of the context they demonstrate better performance than monolinguals. It is also an indicator that bilinguals are better at capturing the global meaning of the story and at considering the listener's perspective than their monolingual peers.

Keywords: Bilingualism, narratives, story grammar, updating.

INTRODUCTION

Various studies show that children's narratives are found to provide an index of their cognitive, semantic and social abilities (Liles 2003). The ability to tell stories requires an understanding of linguistic, cognitive, and social domains (Tager-Flusberg and Sullivan 1995). In addition to this and with respect to the different domains that constitute a narrative, Perkins (2007) claims that narrative analysis is part of discourse studies as well as of pragmatics, since inferencing and referencing are essential elements of narration.

Accordingly an effective narrator has to structure the story's events in an intelligible and unambiguous way taking into consideration the listener's needs for understanding the setting, characters and outcomes of the story (Rumpf, Kamp-Becker, Becker and Kauschke 2012). Focusing mainly on the listener's perspective Cummings (2009) states that the interrelation of world knowledge, language and cognitive skills with pragmatics is essential for the production of a 'well structured' narration. More specifically, he claims that "a narrative that fails to take account of listener knowledge by leaving certain information implicit and by presupposing other information will be inefficient" (2009: 23). An effective narrator is also required to consider the perspectives of the story characters in order to explain their motivations and reactions (Stein and Glenn 1979).

Narratives are instituted from two important domains, i.e. microstructure and macrostructure. The terms micro- and macrostructure were first introduced by Kintch and van Dijk (1978). In their model of text comprehension, macrostructure involves the characterization of the

discourse as a whole, whereas microstructure was the local structure of individual propositions.

LITERATURE REVIEW

Macrostructure is a universal knowledge about story telling, consisting of the characters of a story, the story components and the sequencing of events. Macrostructure is commonly observed via the appearance of crucial story-plot elements (goal, attempt, outcome) and the sequential order (temporal, causal) in which events are depicted (McCabe and Rollins 1994). These components are elements of what is called ‘story grammar’, which constitutes the essential part of a story telling (Stein and Glenn 1979).

The story grammar model assumes that all stories have a setting system and an episode system. The setting system provides background information and introductory statements about the characters and the relevant context, while the episode system includes three main components that occur in all stories, namely (a) an initiating event (i.e. an external event that motivates the main characters to act), (b) internal plans (i.e. intended actions to reach a goal and solve the problem), and (c) consequences/outcomes (i.e. success or failure in achieving a goal). According to Faulkner and Coates (2011: 15) the story grammar is an ideal way to detect “children’s developing ability to understand narrative structures.” An interesting observation is that in order to have a complete episode, the narrator must include all three of these key components. The more elaborate, sequential, thematic, and complex a story is, the better its perceived macrostructural quality is going to be (Applebee 1978, McCabe and Peterson 1984).

Studies so far have shown that bilingual children perform similarly in their L2 compared to monolingual children in a number of measures, such as story grammar, metacognitive statements and temporal links. These results indicate cross-language transfer of higher-order narrative skills. On the other hand, studies that concern bilinguals’ vocabulary and morphosyntax have shown that monolinguals outperform bilinguals. These studies imply little transfer of lower-order categories (e.g. Uccelli and Pàez 2007, Pearson 2002).

METHODOLOGY

Participants

Our participants were 50 Greek-Albanian bilingual children and 50 Greek monolingual, aged from 8 to 10 years old (mean age: 9;2 $SD = 0.89$ age range: 8;1-10;3), who were recruited from public schools in Greece. The main language of instruction of all children is the Greek language and they attend classes in their heritage tongue (i.e. Albanian) for 2 hours every weekend.

Material

In order to determine language dominance among the bilingual participants (either in Greek or in Albanian), demographic and parental questionnaires were administered as a tool for collecting information regarding the language history and literacy practices of the participants. The questions included in the questionnaires referred to the following two categories: (a) Home language history, which accounts for the exposure the child had to each language from birth up to the age of schooling and (b) Current language use, which deals with issues of language preference in every-day life. The latter category facilitates the collection of information regarding language production during oral interactions with peers or family members, as well as language comprehension that includes daily activities such as

watching TV/movies. Via the questionnaires we were able to measure the Socioeconomic status. The socioeconomic status (SES) of the children was measured by maternal education (cf. Esminger and Fothergill 2003, Hoff, Laursen and Tardif 2002) and it was calculated on a 5-point Likert-type scale, with 5 representing the highest educational level attained from compulsory primary education to tertiary education, which we adapted from the UBILEC (Unsworth 2013, and for an overview see Hoff 2006).

In order to measure bilingual children's non verbal abilities we used the Ravens task (2008). Participants' vocabulary abilities were assessed by the *Expressive Vocabulary Test* (Renfrew 1997).

The narrative oral retelling task was used to assess participants' story grammar in Greek. The tool used for the specific task is the ENNI assessment tool, an instrument that targets children aged from 4 years and aims at exploring participants' language production skills. The instrument consists of short stories presented in pictures, containing 2-4 characters. The procedure of the experiment was as follows: Looking at a computer screen, the children were presented with three coloured digital envelopes and they were asked to select one of them. After the end of the story, the participants were asked to retell the story they heard to a person unfamiliar with the content of the instrument (for more details see Andreou, 2015).

In order to create the composite Story Grammar score we divided the retelling stories into three episodes. In the stories each episode consists of 1) a Goal 2) an Attempt (i.e. the effort that the main character makes in order to reach the goal), and 3) an Outcome (i.e. the result of the main character's effort to reach the goal). In each episode the child is awarded 3 points for the correct production of Goal, Attempt and Outcome, 2 points for producing 2 elements, one being the outcome, so it will be either the Goal and the Outcome or the Attempt and the Outcome, 1 point for producing 2 elements but with the Outcome missing, i.e. the Goal and the Attempt, and 0 points for expressing only one element. Finally, 2 points are also given for the correct reproduction of the place and the time, and 1 point for the use of introduction that concerns the main protagonists of each story. The maximum score of the oral retellings' Story Grammar is 15.

Finally, a verbal N-back task was used to tap on children's updating abilities. For this task children were presented with a series of letters one at a time. Children were asked to judge whether each stimuli matched the one presented 2 items previously. If the current digit was identical to the one presented 2 steps back, the participants would have to press "E" on the keyboard. There was a practice block, followed by a test block of 60 stimuli.

RESULTS

The results with respect to home language history have shown that our Greek-Albanian children had more exposure to Greek (63.5%) compared to Albanian ($t(49)= 2.034, p= 0.021$). This result strengthened in the current language use category in which the exposure to Greek was 75.6% ($t(49)= 5.123, p< 0.001$).

There were no differences between the two groups with respect to their SES and Ravens score ($t(99)= 1.001, p= 0.524$ and $t(99)= .862, p= 0.572$, respectively).

In the Expressive Vocabulary Task the mean score of correct responses for the children in Greek was 72.1 ($SD = 3.5$) and in Albanian 59.3 ($SD = 4.2$). One-way ANOVA analysis with

Language (Albanian and Greek) as the between-subjects factor was run on the children's expressive vocabulary scores. The result revealed that bilinguals' performance was better in the Greek language ($F(1, 49) = 3.552, p = .001$).

Table 1 presents the percentages mean scores of each group related to story grammar and the updating task.

Table 1: Participants' percentage means score and SDs

Groups	Story Grammar (max:100)	Updating task (max:100)
Greek-Albanian (50)	76.28 (5.70)	69.72 (10.1)
Monolinguals (50)	67.73 (4.89)	48.2 (8.4)

Story Grammar data present an effect of Bilingualism ($F(1,99)=4.233, p=.003$), with Monolingual children lagging behind the Bilingual ones. A follow-up analysis reveals significant bivariate correlation between N-Back scores and Raven's scores and Story Grammar on the other: $r(100)=.332, p<.001$ and $r(100)=.419, p<.001$, respectively. From these two factors only N-Back scores ($F(1,99)=31.243, p<.001, \eta^2=.411$) was found to be a significant covariate. Pairwise comparisons with control of N-Back factor lead to the decrease of the difference between Bilinguals and Monolinguals, although Bilinguals continue to exhibit better performance relatively to their monolingual peers.

DISCUSSION

A positive Bilingualism effect is revealed in the performance on macrostructure. The positive impact of Bilingualism on the production of narratives in macrostructure possibly reflects abstract structures shared by the two languages. It seems that macrostructure constitutes a domain that is not language-dependent. This advantage is consistent with the claim that bilinguals have better metalinguistic awareness (Bialystok, 2007), something that leads to a better performance with respect to Story Grammar. Furthermore according to our results bilinguals develop better global performance of narration earlier than monolinguals who seem to reach the same level around the age of 11. In other words, bilingual children seem to be better at capturing the global meaning of the story and to consider the listener's perspective than their monolingual peers. This finding suggests that when bilinguals deal with discourse representation without focusing on linguistics features of the context they demonstrate better performance than monolinguals (Andreou, 2015).

The result that we observed still holds even after controlling for children's updating skills. With respect to the updating skills that were found to correlate with Story Grammar we may support the view that this component carries a cognitive load that confers children with low updating skills a disadvantage.

CONCLUSIONS

As we already mentioned studies so far have shown that bilingual children perform similarly in their L2 compared to monolingual children in measures such as story grammar. The novelty of this study is the advantage of bilingualism that we detected which shows that

higher-order narrative skills can be transferred from one language to the other. This study also highlights the importance of cognition (i.e. updating skills) and not the language proficiency factor in the measure of story grammar.

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